This Page Is Inserted by IFW Operations and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents will not correct images, please do not report the images to the Image Problem Mailbox.

THIS PAGE BLANK (USPTO)

THIS PAGE BLANK (USPTO)

.

```
Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Minimum DB seq
Maximum DB seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Run on:
                                                                                                                                                                                                                                     ö
     110
110
111
12
                                                                                                                                                                                                                                                                                                                    Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                     Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length: 0 length: 6
                                                                                                                                                                                                                                   Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                             10:
112:
113:
114:
116:
                                                                                                                                                                                                                                                   Query
 9000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A_Geneseq_36:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            268485 seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-081-522-4
33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    March 6, 2001, 09:42:17; Search time 14.27 Seconds (without alignments)
14.377 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 GRGDFV 6
                                                                                                                                                                                                                                                                                                                                                                                                      SIDS1/gcgdata/geneseq/geneseqp/AA1988.DAT:*

SIDS1/gcgdata/geneseq/geneseqp/AA1989.DAT:*

SIDS1/gcgdata/geneseq/geneseqp/AA1990.DAT:*

SIDS1/gcgdata/geneseq/geneseqp/AA1991.DAT:*

SIDS1/gcgdata/geneseq/geneseqp/AA1991.DAT:*

SIDS1/gcgdata/geneseq/geneseqp/AA1992.DAT:*

SIDS1/gcgdata/geneseq/geneseqp/AA1994.DAT:*

SIDS1/gcgdata/geneseq/geneseqp/AA1995.DAT:*

SIDS1/gcgdata/geneseq/geneseqp/AA1995.DAT:*

SIDS1/gcgdata/geneseq/geneseqp/AA1997.DAT:*

SIDS1/gcgdata/geneseq/geneseqp/AA1998.DAT:*

SIDS1/gcgdata/geneseq/geneseqp/AA1998.DAT:*

SIDS1/gcgdata/geneseq/geneseqp/AA1999.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /SIDS1/gcgdata/geneseq/geneseqp/AA1980.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1981.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1982.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1983.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1984.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1985.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /SIDS1/gcgdata/geneseq/geneseqp/AA1986.DAT:
/SIDS1/gcgdata/geneseq/geneseqp/AA1987.DAT:
                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                         /SIDS1/gcgdata/geneseq/geneseqp/AA2000.DAT:*
     34193795 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gapext 0.5
                                                                                                                                                                                                                                   IJ
                                                   R82385
R82386
W33056
W41096
W41097
W41098
                                                                                                                                                                                                                                                                                      SUMMARIES
Peptide used for t

Peptide used for t

Peptide used for t

Cyclic integrin al

Alpha-v beta-3 ant

Alpha-v beta-6 ant

Cyclic integrin al

Cyclic peptide 621
                                                                                                                                                                                                                               Description
```

26 78.3 5 13 R24518 Platele	6 78.3 5 12 R11757 Per	7 81.3 6 18 Y08057 Biotin	7 81.3 6 15 R45377 Cell	7 81.3 6 15 R45376 Cell	7 81.3 6 15 R45374 Cell	7 81.3 6 15 R45372 Cell	7 81.3 6 15 R45370 Cell ad	7 81.8 -5 20 W92307 Cyclic	7 81.3 5 19 W41247 Alpha-v	7 81.9 5 19 W41243 Alpha-v	7 81.9 5 19 W41240 Alpha	7 81.8 5 19 W41109	7 81.8 5 19 W4I101 Alpha	7 81.8 5 19 W41099 Alpha-	7 81.9 5 18 W33055 Alpha-v	7 81.8 5 18 W33057 Alpha-v	7 81.8 5 16 R82389 Cyclic	7 81.3 5 16 R82387. Cycli	7 81.9 5 15 R45387 Cell	7 81.8 5 15 R45386 Cell	7 81.8 5 15 R45384 Cell	7 81.3 5 15 R45382 Cell	9 87.9 6 21 Y54951 Pepti	9 87.9 ·6 21 Y54947 Pepti	9 87.9 6 19 W50596 GPIIb	9 87.9 6 19 W52094 Targett	9 87.9 6 19 W52091 Targett	9 87.9 6 14 R69331 Gp IIb/	9 87.9 6 14 R69327 Gp IIb/	9 87.9 5 13 R24515 Platele	9 87.9 5 1
elet an lentlv	ide	in d		adhesion	adhesion	adhesion	adhesion	ic azapept	-v-beta-5 an	-v-beta-5 an	-v-beta-5 an	-v beta-3	-v beta-3 an	-v beta-3	-v, beta-5 v	-v, beta-5 v	c integrin a	lic integrin a	l adhesion inh	l adhesion	l adhesion	l adhesion i	Ç.	ptide lig	PIIb/IIIa recep	argetting pe	argetting peptid	p IIb/IIIa ı	p IIb/IIIa r	latelet antagon	ptid

ALIGNMENTS

R82383 standard; peptide; 6 AA.

```
30-DEC-1994;
18-MAR-1994;
                                                                                                                                                          Key
Modified-site
                                                                                                                                                                                     Synthetic.
                                                                                                                                                                                                      Integrin; alpha-v-beta-3; inhibitor; angiogenesis; antagonist;
fibrinogen; inflammation; apoptosis; restenosis.
                                                                                                                                                                                                                                 Peptide used for the synthesis of integrin alpha-v-beta-3 inhibitors.
                                                                                                                                                                                                                                                 03-MAY-1996 (first entry)
                                                                                                                                                                                                                                                                    R82383;
                                           09-MAR-1995;
                                                            28-SEP-1995
                                                                                                                 Modified-site
                                                                                                                                  Misc-difference
(SCRI ) SCRIPPS RES INST.
                                                                            WO9525543-A1
                 94US-0366665.
94US-0210715.
                                           95WO-US03035
                                                                                                                  σ
                                                                                                                                                                     Location/Qualifiers
                                                                                                                                          /note= "BOC-Gly, the N-terminal is
butyloxycarbonyl group"
                                                                                                        /note= "Val-OMe,
                                                                                                                          'note= "D-Arg"
                                                                                               a methyl ester group"
                                                                                                        the C-terminal is
                                                                                                                                                   protected
                                                                                                       protected
                                                                                                                                                    by
                                                                                                        Ьy
```

/

ě

```
Query Match
Best Local Similarity
watches 6; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The peptides R82383-85 are peptides used in the synthesis of a group of inhibitor peptides of integrin alpha-v-beta-3. The inhibitor peptides (R82386-96) may be administered in a compsn. and are useful for inhibition of inflamed tissue anglogenesis, e.g. that associated with rheumatoid arthritis, retinal anglogenesis associated with diabetic retinopathy, that associated with haemangioma, solid tumour metastases. The alpha-v-beta-3 antagonists are also useful to induce apoptosis in neovasculature in a tissue. The inhibitor peptides are pref. cyclic and contain an RGD sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Inhibition of angiogenesis in a tissue, e.g. following angioplasty - by admin. of a compsn. comprising an alpha-v-beta3 antagonist, useful for regression of established tumours, treating inflamed
Inhibition of angiogenesis in a tissue, e.g. following angioplasty by admin. of a compsn. comprising an alpha-v-beta3 antagonist,
                                                                                                   30-DEC-1994;
18-MAR-1994;
                                                                                                                                                                                                                                                                                                                                                           03-MAY-1996
                                                                                                                                                                                                                                                                                                                                                                                R82384;
                                                                                                                                                                                                                                                                                                                                                                                                    R82384 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Brooks
                                   WPI; 1995-344463/44.
                                                                             (SCRI ) SCRIPPS
                                                                                                                                   09-MAR-1995;
                                                                                                                                                                               W09525543-A1
                                                                                                                                                                                                                Misc-difference
                                                                                                                                                                                                                                                Modified-site
                                                                                                                                                                                                                                                                               Synthetic
                                                                                                                                                                                                                                                                                                     fibrinogen;
                                                                                                                                                                                                                                                                                                                                     Peptide used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Example 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tissue, etc.
                                                                                                                                                                                                                                                                                                                                                                                                                        .
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GRGDFV 6
||||||
1 grgdfv 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ט',
                                                                                                                                                                                                                                                                                                               alpha-v-beta-3;
                                                        Cheresh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cheresh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                    inflammation;
                                                                                                                                                                                                                                                                                                                                      for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A
                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                  94US-0366665.
94US-0210715.
                                                                                                                                   95WO-US03035
                                                                                                                                                                                                                                              Location/Qualifiers
                                                                             RES INST
                                                                                                                                                                                                                N
                                                                                                                                                                                                                                                                                                                                                                                                    peptide; 6
                                                                                                                                                                                                     /note-
                                                                                                                                                                                                                                                                                                                                    the synthesis of integrin alpha-v-beta-3 inhibitors.
                                                        DA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        135pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%;
                                                                                                                                                                                                   "D-Arg"
                                                                                                                                                                                                                         "BOC-Gly, the N-terminal is butyloxycarbonyl group"
                                                                                                                                                                                                                                                                                                    inhibitor; apoptosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         English.
                                                                                                                                                                                                                                                                                                                                                                                                     À
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 33;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                     angiogenesis; antagonist;
restenosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 16;
2.1e+05;
hes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                  protected
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                   δą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

```
당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The peptides R82383-85 are peptides used in the synthesis of a group of inhibitor peptides of integrin alpha-v-beta-3. The inhibitor peptides (R82386-96) may be administered in a compsn. and are useful for inhibition of inflamed tissue angiogenesis, e.g. that associated with rheumatoid arthritis, retinal angiogenesis associated with diabetic retinopathy, that associated with haemangioma, solid tumour metastases. The alpha-v-beta-3 atagonists are also useful to induce apoptosis in neovasculature in a tissue. The inhibitor peptides are pref. cyclic and contain an RGD sequence.
                                                                                               Inhibition of angiogenesis in a tissue, e.g. following angioplasty
- by admin. of a compsn. comprising an alpha-v-beta3 antagonist,
useful for regression of established tumours, treating inflamed
                                                                                                                                                                   Brooks P,
                                                                                                                                                                                                               30-DEC-1994;
18-MAR-1994;
                                                                                                                                                                                                                                                 09-MAR-1995;
                                                                                                                                                                                                                                                                                                                                          Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  R82385;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R82385 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   useful for regression of established tumours, treating inflamed
                                                                                     tissue, etc.
                                                                                                                                               WPI; 1995-344463/44.
                                                                                                                                                                                                                                                                        28-SEP-1995
                                                                                                                                                                                                                                                                                             WO9525543-A1
                                                                                                                                                                                                                                                                                                                              Misc-difference
                                                                                                                                                                                                                                                                                                                                                              Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                    Peptide used
                                                                                                                                                                                                                                                                                                                                                                                                                                            03-MAY-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tissue,
                                                               Example 1; Page
                                                                                                                                                                                                                                                                                                                                                                                    fibrincgen;
                                                                                                                                                                                                                                                                                                                                                                                              Integrin; alpha-v-beta-3;
                                                                                                                                                                                        (SCRI ) SCRIPPS RES INST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 GRGDEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            crgdfv 6
                                                                                                                                                                    Cheresh DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  თ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                     inflammation;
                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                    fcr the synthesis of integrin alpha-v-beta-3 inhibitors.
                                                                                                                                                                                                               94US-0365665
94US-0210715
                                                               97;
                                                                                                                                                                                                                                                 95WO-US03035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   96;
                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                   /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                135pp;
                                                               135pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6 AA.
                                                                                                                                                                                                                                                                                                                                                                                    inhibitor; angiogenesis;
apoptosis; restenosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 33;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2.1e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
```

The peptides R82383-85 are peptides used in the synthesis of a group of inhibitor peptides of integrin alpha-v-beta-3. The inhibitor peptides (R82386-96) may be administered in a compson, and are useful for inhibition of inflamed tissue angiogenesis, e.g. that associated

are useful

rheumatoid arthritis, retinal angiogenesis

Theory.

```
RESULT
R82386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Thehes 6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
Query Match
Best Local Similarity
Matches 6; Conser
                                                                                R82386-96 are a group of inhibitor peptides of integrin alpha-v-beta-3. The inhibitor peptides may be administered in a compsn. and are useful for inhibition of inflamed tissue angiogenesis, e.g. that associated with rheumatoid arthritis, retinal angiogenesis associated with diabetic retinopathy, that associated with haemangioma, solid tumours, or solid tumour metastases. The alpha-v-beta-3 antagonists are also useful to induce apoptosis in neovasculature in a tissue. The inhibitor peptides are pref. cyclic and contain an RGD sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R82386;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          diabetic retinopathy, that asscolated with haemangioma, solid tumours, or solid tumour metastases. The alpha-v-beta-3 atagonists are also useful to induce apoptosis in neovasculature in a tissue. The inhibitor peptides are pref. cyclic and contain an RGD sequence.
                                                                                                                                                                                                Claim 4;
                                                                                                                                                                                                                                 Inhibition of angiogenesis in a tissue, e.g. following angioplasty - by admin. of a compsn. comprising an alpha-v-beta3 antagonist, useful for regression of established tumours, treating inflamed
                                                                                                                                                                                                                                                                                                             Brooks P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cyclic integrin alpha-v-beta-3 inhibitor peptide no. 62181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             03-MAY-1996
                                                             Sequence
                                                                                                                                                                                                                                                                                      WPI; 1995-344463/44.
                                                                                                                                                                                                                                                                                                                                                             30-DEC-1994;
18-MAR-1994;
                                                                                                                                                                                                                                                                                                                                                                                                   09-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                           28-SEP-1995.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO9525543-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 fibrinogen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R82386 standard; peptide; 6 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                     (SCRI ) SCRIPPS RES INST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Integrin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ۳
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 GRGDFV 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ||||||
| grgdfv 6
                                                                                                                                                                                              Page 97; 135pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                alpha-v-beta-3; inhibitor;
n; inflammation; apoptosis;
                                                                                                                                                                                                                                                                                                           Cheresh DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      σ
                                                             σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ŗ,
                                                                                                                                                                                                                                                                                                                                                             94US-0365665.
94US-0210715.
                                                                                                                                                                                                                                                                                                                                                                                                   95WO-US03035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note- "D-Arg"
           100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%;
                                                                                                                                                                                                English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
          Score 33;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        red. No. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                anglogenesis; antagonist;
restenosis; cyclic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 16;
2.1e+05;
           DB 16;
2.1e+05;
                     Length 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
```

Conservative

0

Mismatches

Indels

0

Gaps

0

Sequence

σ

₿

```
RESULT
W33056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                      The present RGD containing peptide is an antagonist of the alpha-v, beta-5 vitronectin receptor, which can be used to inhibit angiogenesis in alpha-v, beta-5 containing tissue, specifically angiogenesis as a result of inflammation (especially rheumatoid arthritis), eye disease (especially diabetic retinopathy, age related macular degeneration, ocular histoplasmosis, retinopathy of prematurity or neovascular glaucoma), corneal neovascular disorders (especially transplantation, herpetic or luetic keratitis, pterygium and neovascular pannus associated with wearing contact lenses), haemangioma, solid tumours and their metastases or cytokines (especially vascular endothelial growth factor, transforming growth factor alpha or epidermal growth factor). The antagonist has the advantage of being very specific, affecting no processes other than angiogenesis and therefore of relatively low
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GRGDEV 6
                                                                                                                                                                                                                                                                                                              Inhibiting angiogenesis with an antagonist selective for the alpha-v,beta-5 integrin receptor - e.g. antibody, RGD peptide or organic mimetic; for treatment of inflammation, eye disease, tum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14-AUG-1995;
14-AUG-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        retinopathy; prematurity; neovascular glaucoma; corneal neovascular disorder; transplantation; herpetic; keratitis; pterygium; neovascular pannus; haemangloma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     vitronectin receptor; inhibition; angiogenesis; inflammation;
rheumatoid arthritis; eye disease; diabetic retinopathy;
age related macular degeneration; ocular histoplasmosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            W33056;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        W33056 standard;
                                                                                                                                                                                                                                                                       Claim
                                                                                                                                                                                                                                                                                                                                                                              WPI; 1997-165019/15
                                                                                                                                                                                                                                                                                                                                                                                                           Brooks
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             solid tumour; metastasis; cytokine; low toxicity;
vascular endothelial growth factor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13-AUG-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              27-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO9706791-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               transforming
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alpha-v, beta-5 vitronectin receptor antagonist
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RGD containing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                       (SCRI ) SCRIPPS RES INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ģ
                                                                                                                                                                                                                                                                       5.
                                                                                                                                                                                                                                                                                                                                                                                                           ָש
                                                                                                                                                                                                                                                                     Page 105;
                                                                                                                                                                                                                                                                                                                                                                                                           Cheresh DA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               growth factor alpha;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     95US-0514799.
96ZA-0006886.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 96WO-US13194.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       peptide; 6 AA
                                                                                                                                                                                                                                                                     126pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "D-form residue"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    antagonist; alpha-v, beta-5;
                                                                                                                                                                                                                                                                                                                                                                                                           Friedlander
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               epidermal
                                                                                                                                                                                                                                                                                                                                                                                                           Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               growth factor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          luetic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cyclic
                                                                                                                                                                                                                                                                                                                  tumours
```

0;

```
Query Match
Best Local Similarity
Thes 6; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT
W41096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
cintegrin alpha-v beta-3. An N- and C-terminally protected peptide (see W41095) was dissolved in methanol to which 2 N NaOH solution was added. The admixture was stirred for 3 hr at 20 degC. After evaporation, the residue was taken up in water, acidified to pH 3 control of the product (see W41096), which has a free C-terminal carboxylic acid, was stirred at 20 degC for 2 hr with 2 N HCl in dioxane to obtain a further peptide (see W41097). This was treated with the cobtain a dicyclohexylcarbodiinide, 1-hydroxyberzotrizzole and N-methylmorpholine to produce the cyclic peptide. The invention crelates to the discovery that angiogenesis is mediated by the specific vitronectin receptor alpha-v beta-3 (nuction inhibits angiogenesis. Claimed CC M41083-94) of human or chicken matrix metalloproteinase, fusion CC polypeptides, cyclic or linear polypeptides, derivatised compound.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Angiogenesis; inhibitor; antagonist; integrin alpha-v beta-3; vitronectin receptor; rheumatoid arthritis; tumour; metastasis; diabetic retinopathy; macular degeneration; restenosis; therapy
                                                                                                                                                                                                                                             This synthetic RGD peptide was used in the preparation of a cyclic peptide, designated 62181 (see W41098), that is an antagonist of integrin alpha-v beta-3. An N- and C-terminally protected peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  31-MAY-1996;
31-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        04-DEC-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO9745137-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alpha-v
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    08-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  W41096;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              W41096 standard; Peptide; 6 AA.
                                                                                                                                                                                                                                                                                                                                Packaging material containing polypeptide antagonist of alphav, beta3 integrin - used for inhibition of anglogenesis, and for treating tumours, inflammation, eye diseases etc.
                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1998-032334/03.
                                                                                                                                                                                                                                                                                                                                                                                                                          Brooks P, Cheresh DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Modified-site
                                                                                                                                                                                                                                                                                                      Example 1; Page 47; 234pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    (SCRI ) SCRIPPS RES INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GRGDFV 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 grgdfv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  96US-0018733
96US-0015869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            97WO-US09158.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       antagonist precursor peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifier
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note= "N-terminus protected by Boc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "D-form residue"
                                                                                                                                                                                                                                                                                                      English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 33;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 18;
. 2.1e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
RESULT
W41097
Y PROSE TO A CONTROL OF THE STATE OF THE STA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PR PR XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
            The peptide product (see W41096), which has a free C-terminal carboxylic acid, was stirred at 20 degC for 2 hr with 2 N HCl in dioxane to obtain a further peptide (see W41097), which has free N- and C-terminals. This was treated with dicyclohexylcarbodismide, 1-hydroxybenzotrizzole and N-methylmorpholine to produce the cyclic peptide. The invention relates to the discovery that angiogenesis is mediated by the specific vitronectin receptor alpha-v beta-3, and that inhibition of alpha-v beta-3 function inhibits angiogenesis. Claimed antaconists of alpha-v beta-3 comprise C-terminal fragments (see W41083-94) of human or chicken matrix metalloproteinase-2, fusion polypeptides, cyclic or linear polypeptides, derivatised polypeptides, a monoclonal antibody or organic mimetic compound.
                                                                                                                                                                                                                                                                                                                                                                                This synthetic RGD peptide was used in the preparation of a cyclic peptide, designated 62181 (see W41098), that is an antagonist of integrin alpha-v beta-3. An N- and C-terminally protected peptide (see W41095) was dissolved in methanol to which 2 N NaOH solution was added. The admixture was stirred for 3 hr at 20 degC. After evaporation, the residue was taken up in water, acidified to pH 3 with diluted HCl and extracted with ethyl acetate.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               angiogenesis; inhibitor; antagonist; integrin alpha-v beta-3;
vitronectin receptor; rheumatoid arthritis; tumour; metastasis;
diabetic retinopathy; macular degeneration; restenosis; therapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Packaging material containing polypeptide antagonist of alphav, beta3 integrin - used for inhibition of anglogenesis, and for treating tumours, inflammation, eye diseases etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               31-MAY-1996;
31-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       08-JUN-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    W41097;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                W41097 standard; Peptide; 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1998-032334/03.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    04-DEC-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alpha-v beta-3 antagonist precursor peptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Example 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (SCRI ) SCRIPPS RES INST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO9745137-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |||||||
| grgdfv 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GRGDFV 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cheresh DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               96US-0018733
96US-0015869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        97WO-US09158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note= "D-form residue"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        234pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 33;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2.1e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
```

S

Sequence

σ

₿

```
RESULT
W41098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                    This synthetic RGD-containing cyclic peptide, designated 62181, is a particularly preferred peptide that has integrin alpha v beta-3 cantagonist activity. It exhibits preferential inhibition of fibringen binding to the alpha v beta-3 receptor. It can be prepared using standard solid phase synthesis techniques (see W41095-97). The invention relates to the discovery that angiogenesis is mediated by the specific vitronectin receptor angiogenesis is mediated by the specific vitronectin receptor alpha-v beta-3, and that inhibition of alpha-v beta-3 function inhibits angiogenesis. Claimed antagonists of alpha-v beta-3; comprise C-terminal fragments (see W41083-94) of human or chicken matrix metalloproteinase-2, fusion polypeptides, cyclic or linear polypeptides, derivatised polypeptides, a monoclonal antibody or corganic mimetic compound. They can be used to inhibit angiogenesis in inflammed; tissue (for treatment of arthritis or rheumatoid carthritis), in solid tumours or metastases (particularly to induce regression or inhibit tumours growth), and in occular disorders such
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                 Packaging material containing polypeptide antagonist of alphav beta3 integrin - used for inhibition of angiogenesis, and for treating tumours, inflammation, eye diseases etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Angiogenesis; inhibitor; antagonist; integrin alpha-v beta-3; vitronectin receptor; rheumatoid arthritis; tumour; metastasis; vitronectin receptor; rheumatoid arthritis; restenosis; therapy; diabetic retinopathy; macular degeneration; restenosis; therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                31-MAY-1996;
31-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          W41098;
           as diabetic retinopathy and macular treat restenosis (all claimed).
                                                                                                                                                                                                                                                                                                                      Example 1; Page 48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 04-DEC-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO9745137-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             circular;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alpha-v beta-3 antagonist cyclic peptide 62181.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          866T-NOF-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       W41098 standard; Peptide; 6 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (SCRI ) SCRIPPS RES INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GRGDFV 6
||||||
1 grgdfv 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    l Similarity
6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cyclic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                960S-0018733
960S-0015869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97WO-US09158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note= "D-form residue"
                                                                                                                                                                                                                                                                                                                   234pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 33;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                          degeneration,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2.1e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                          well as to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        င္မ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                             This synthetic RGD peptide was used in the preparation of a cyclic peptide, designated 62181 (see W41098), that is an antagonist of integrin alpha-v beta-3. The peptide was dissolved in methanol to which 2 N NaOH solution was added. The admixture was stirred for 3 hr at 20 degC. After evaporation, the residue was taken up in water, acidified to pH 3 with diluted HCl and extracted with ethyl accetate. The peptide product (see W41096) was stirred at 20 degC for 2 hr with 2 N HCl in dioxane to obtain a further peptide (see W41097). This was treated with dicyclohexylcarbodiimide,
          1-hydroxybenzotriazole and N-methylmorpholine to produce peptide 62181. The invention relates to the discovery that angiogenesis is mediated by the specific vitronectin receptor alpha-v beta-3, and that inhibition of alpha-v beta-3 function inhibits angiogenesis. Claimed antagonists of alpha-v beta-3 comprise C-terminal fragments (see W41083-94) of human or chicken matrix metalloproteinase-2,
                                                                                                                                                                                                                                                               Packaging material containing polypeptide antagonist of alphav, beta3 integrin - used for inhibition of angiogenesis, and for treating tumours, inflammation, eye diseases etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                          31-MAY-1996;
31-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           vitronectin receptor; rheumatoid arthritis; tumour; metastasis;
diabetic retinopathy; macular degeneration; restenosis; therapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                    30-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               08-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          W41095;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     W41095
                                                                                                                                                                                                                                        Example 1; Page 47; 234pp; English.
                                                                                                                                                                                                                                                                                                                        WPI; 1998-032334/03.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              04-DEC-1997.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO9745137-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Anglogenesis; inhibitor; antagonist; integrin alpha-v beta-3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alpha-v beta-3 antagonist precursor peptide
                                                                                                                                                                                                                                                                                                                                                                              (SCRI ) SCRIPPS RES INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        lillll
1 grgdfv 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 GRGDFV 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     standard; Peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6
                                                                                                                                                                                                                                                                                                                                                  Cheresh DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                          96US-0018733.
96US-0015869.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    97WO-US09158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "C-terminus protected by methyl ester"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "D-form
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "N-terminus protected
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 33;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2.1e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               19:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            bу
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
```

```
RESULT
W41242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SXC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 6
                                                           The present peptide represents an alpha-v-beta-5 integrin antagonists. Alpha-v-beta-5 is a vitronectin receptor. Inhibitors of alpha-v-beta-5 can inhibit angiogenesis. The specification describes a novel labelled package that contains an inhibitor of angiogenesis i.e. an alpha-v-beta-5 antagonising polypeptide that binds to integrin alpha-v-beta-5 and includes a part of the C-terminal domain of MMP-2. The antagonists are used to inhibit angiogenesis in inflamed tissue, in solid tumours or metastases, and in a wide range of ocular disorders (e.g. diabetic or other forms of retinopathy, neovascular glaucoma, or corneal transplants). They are particularly used to induce regression of to inhibit growth of tumours. The alpha-v-beta-5 antagonists can also be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alpha-v-beta-5 antagonist; angiogenesis; tumour growtl
        used to treat restenosis caused by migration of smooth muscle cells following angioplasty and to reduce blood supply to selected tissues. The antagonists particularly inhibit neovascularisation where this is induced by cytokines, e.g. transforming growth factor alpha, epiderma.
                                                                                                                                                                                                                                    Disclosure;
                                                                                                                                                                                                                                                                          Packaging material containing polypeptide antagonist of alphav beta5 integrin - used for inhibition of angiogenesis, and for
                                                                                                                                                                                                                                                                                                                       WPI; 1998-041758/04
                                                                                                                                                                                                                                                                                                                                                                                                       31-MAY-1996;
31-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                              30-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          04-DEC-1997.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO9745447-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alpha-v-beta-5 antagonistic peptide 62181.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           09-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        W41242;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  W41242 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          polypeptides,
                                                                                                                                                                                                                                                                                                                                                                          (SCRI ) SCRIPPS RES INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GRGDFV 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 grgdfv 6
                                                                                                                                                                                                                                                                                                                                               P, Cheresh DA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           h 100.0%;
Similarity 100.0%;
6; Conservative (
                                                                                                                                                                                                                                                               tumours,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6 AA;
                                                                                                                                                                                                                                    Page 41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           D
                                                                                                                                                                                                                                                                                                                                                                                                     96US-0018733
96US-0015859
                                                                                                                                                                                                                                                                                                                                                                                                                                               97WO-US09099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           monoclonal antibody or organic mimetic compound
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein;
                                                                                                                                                                                                                                                               inflammation,
                                                                                                                                                                                                                                  117pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        growth;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "peptide is made cyclic last residues"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "D-form residue'
                                                                                                                                                                                                                                                                                                                                                 Friedlander
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        treatment; vitronectin receptor; inhibition;
h; restenosis; neovascularisation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 33;
Pred. No.
                                                                                                                                                                                                                                                             eye diseases etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             red. No. 2.1e+05;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       via the first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                               be or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

Š

1 GRGDFV

Matches Query Match Best Local

l Similarity 5; Conserv

Conservative

Ļ Score Pred.

Mismatches NO; Ν

Indels

0

Gaps

0,

DB DB 16; .1e+05;

Length

```
RESULT
R82393
R8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               88888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
                                               R82386-96 are a group of inhibitor peptides of integrin alpha-v-beta-3. The inhibitor peptides may be administered in a compsn. and are useful for inhibition of inflamed tissue angiogenesis, e.g. that associated with rheumatoid arthritis, retinal angiogenesis associated with diabetic retinopathy, that associated with haemangioma, solid tumours, or solid tumour metastases. The alpha-v-beta-3 atagonists are also useful to induce apoptosis in neovasculature in a tissue. The inhibitor peptides are pref. cyclic and contain an RGD sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  note:
using
                                                                                                                                                                                                                                                                                                                                                                               Inhibition of angiogenesis in a tissue, e.g. following angioplasty - by admin. of a compsn. comprising an alpha-v-beta3 antagonist, useful for regression of established tumours, treating inflamed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Brooks P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30-DEC-1994;
18-MAR-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   09-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Integrin; alpha-v-beta-3; inhibitor; angiogenesis; antagonist;
fibrinogen; inflammation; apoptosis; restenosis; cyclic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cyclic integrin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           03-MAY-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R82393;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  R82393 standard; peptide; 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
  Sequence
                                                                                                                                                                                                                                                                                                                                                      tissue,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28-SEP-1995.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO9525543-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Misc-difference
                                                                                                                                                                                                                                                                                                 Example 1; Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1995-344463/44.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (SCRI ) SCRIPPS RES INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GRGDFV 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 grgdfv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  this sequence does not appear in the specification; it was created information provided.
                                                                                                                                                                                                                                                                                                                                                         etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cheresh DA;
  σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     94US-0366665.
94US-0210715.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   95WO-US03035
                                                                                                                                                                                                                                                                                                 47; 135pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      alpha-v-beta-3 inhibitor peptide no.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "D-Ala"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 33;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2.1e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ō,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

밁

||||||: | grgdfl 6

```
Query Match
Best Local Similarity
""" 6 S; Conserv
                                                                                                                         RESULT
W41105
                           Ş
  밁
                                                                                                                                                             prepared using standard solid-phase synthesis techniques. Unlike RGD-containing or RGD-derivatised cyclic peptides (see W41098-101), peptide 62179 did not exhibit preferential inhibition of fibrinogen binding to the alpha-v beta-3 receptor. The invention relates to the discovery that angiogenesis is mediated by the specific vitronectin receptor alpha-v beta-3, and that inhibition of alpha-v beta-3 function inhibits angiogenesis. Claimed antagonists of alpha-v beta-3 comprise C-terminal fragments (see W41083-94) of human or chicken matrix metalloproteinase-2, fusion polypeptides, cyclic or linear polypeptides, derivatised polypeptides, a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Angiogenesis; inhibitor; antagonist; integrin alpha-v beta-3; vitromectin receptor; rheumatoid arthritis; tumour; metastasis; diabetic retinopathy; macular degeneration; restenosis; therapy; circular; cyclic.
                                                                                                                                                                                                                                                                                                       This synthetic cyclic peptide, designated 62179, was examined as a potential antagonist of integrin alpha-v beta-3. It was
                                                                                                                                                                                                                                                                                                                                                                           Packaging material containing polypeptide antagonist of alphav, beta3 integrin - used for inhibition of angiogenesis, and for treating tumours, inflammation, eye diseases etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                31-MAY-1996;
31-MAY-1996;
                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                 Example 1; Page 51; 234pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1998-032334/03.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Brooks P, Cheresh DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (SCRI ) SCRIPPS RES INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     04-DEC-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               W09745137-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cyclic peptide 62179.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         08-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    W41105;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             W41105
                                                                                                                                                     monoclonal antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12
                           1 GRGDFV 6
grgdfl:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             standard; Peptide;
                                                                                                                         6 AA;
                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                960S-0013733.
960S-0015869.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        97WO-US09158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note-
                                                                                                                                                     polypeptides, derivati
ody or organic mimetic
                                                                   90.9%;
83.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "D-form residue"
                                                      ۲.
                                                     Score 30; DB 19;
Pred. No. 2.1e+05;
1; Mismatches 0;
                                                                                                                                                     compound
                                                                              Length 6;
                                                      Indels
                                                      9
                                                      Gaps
                                                      0
```

RESULT

13

```
R11760
ID R1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
"""" 5; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
  PXPXPXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The peptide, and shorter versions eg RGDF, including the cell recognition sequence RGDF, can be used to prepare a cell culture substrate. A surface (glass, PET etc) is chemically derivatised with the peptides to yield a proteolytically stable, reusable surface which promotes the amt. of and enhances the rate of receptor mediated cell adhesion. See also R11757-R11762.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Surfaces having cell small peptides which cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R11760 standard; Protein; 5 AA.
                                                  07-MAY-1992.
                                                                                               JP04134096-A.
                                                                                                                                                                                                   Clinical effect; antagonist
                                                                                                                                                                                                                                                     Platelet antagonist pepetide
                                                                                                                                                                                                                                                                                                       02-DEC-1992
                                                                                                                                                                                                                                                                                                                                                          R24515;
                                                                                                                                                                                                                                                                                                                                                                                                            R24515 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 3; Page 91; 127pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hubbell JA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         28-SEP-1989;
21-MAY-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         substrate.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cell surface
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Peptide #4 having cell recognition sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     03-JUL-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R11760;
21-SEP-1990;
                                                                                                                                                 Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1991-132844/18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (TEXA ) UNIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27-SEP-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18-APR-1991.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO9105036-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 grgdf
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GRGDF 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ŋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        v
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ÆĄ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                       (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Massia SP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OF TEXAS SYST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   adhesion; receptor mediated attachment;
  90JP-0253849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           89US-0414144
90US-0527198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30WO-US05525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               87.9%; 5c.
100.0%; Pr
                                                                                                                                                                                                                                                                                                       entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           adhesive effects - formed by covalently linking facilitate cell receptor mediated attachment of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Desai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 29;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 12;
2.1e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      culture;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Çī
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
```

```
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   XXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
Matches 5; Conserv
                                                                                Reagent for scintigraphic imaging of thrombi with 99m technetium comprises synthetic peptide which binds to thrombus, covalently coupled to metal binding gp.; rapidly cleared from blood and
The invention relates to reagents for scintigraphic imaging of a thrombus in-vivo, comprising (A) a specific binding compound capable of binding to at least one component of a thrombus, covalently linked
                                                                                                                                                                                                                                                                                                              Key
Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                             Gp IIb/IIIa
                                                                                                                                                                                                                                                                                                                                                                                                                                                            R69327;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R69327 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The sequences given in R24514-8 are peptides which are useful as the telet antagonists. These peptides have higher activity than conventional peptide of Arg-Gly-Asp-Val. These peptides have a clinical effect at a lower dose, dosage is 2.5-5.0 mg/kg/day.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; Page 5; 10pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New peptide(s) comprising arginine-glycine-asparagine and hyaluronic acid - useful as platelet antagonists with higher activity than arginine-glycine-asparagine-valine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1992-204525/25.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21-SEP-1990;
                                                Claim 41; Page 46;
                                                                                                                                    WPI; 1993-386229/48.
                                                                                                                                                           Dean RT,
                                                                                                                                                                                                        21-MAY-1992;
                                                                                                                                                                                                                                                       25-NOV-1993.
                                                                                                                                                                                                                                                                                                                                                  Synthetic
                                                                                                                                                                                                                                                                                                                                                                          Scintigraphy; to
technetium-99m;
                                                                                                                                                                                                                                                                                                                                                                                                                                     25-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                          tissue
                                                                                                                                                                                                                                21-мау-1993;
                                                                                                                                                                                                                                                                               WO9323085-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (SEGK ) SEIKAGAKU KOGYO CO LTD
                                                                                                                                                                                (DIAT-) DIATECH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             سر
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 GRGDF 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |||||
| grgdf 5
                                                                                                                                                           Lister-James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5 AA;
                                                                                                                                                                                                                                                                                                                                                                                                            receptor ligand used in scintigraphic imaging of thrombi.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                         m; radiolabelled; Gp IIb/IIIa receptor ligand.
                                                                                                                                                                                                        92US-0886752.
                                                                                                                                                                                                                                93WO-US04794.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         90JP-0253849.
                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                    /note= "(S-benzoyl-2-mercaptoacetyl)-Gly"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 peptide;
                                                61pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     87.9%; Score 29; 100.0%; Pred. No.
                                                                                                                                                           4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 13; 1
. 2.1e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
```

```
CC to (B) a technetium-99m-binding moiety. Specific peptides CC constituting the reagents are claimed as new. The present peptide is CC one such peptide.

XX

SQ Sequence 5 AA;

Query Match

87.9%; Score 29; DB 14; Length 6;
Best Local Similarity 100.0%; Pred. No. 2.1e+05;
```

Query Match 87.9%; Score 29; DB 14; Length 6;
Best Local Similarity 100.0%; Pred. No. 2.1e+05;
Matches 5; Conservative 0; Mismatches 0; Indels 0; Gaps
Qy 1 GRGDF 5
| | | | | | |
Db 2 grgdf 5

0

Search completed: March 6, 2001, 09:42:54 Job time: 37 sec

```
Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Post-processing: Minimum Match
Maximum Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Maximum DB seq length: 0 Maximum DB seq length: 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
 Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                   Score
                                                                                                                                                                                                                                                                                                                                                  Query
Match Length
Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-081-522-4
33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       174772 seqs, 17957048 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gapop 10.0 , Gapext 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        March 6, 2001, 09:42:18; Search time 12.64 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Issued_Patents_AA: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GRGDFV 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                         /cgn2_6/ptodata/2/laa/5A_COMB.pep:*
/cgn2_6/ptodata/2/laa/5B_COMB.pep:*
/cgn2_6/ptodata/2/laa/5_COMB.pep:*
/cgn2_6/ptodata/2/laa/FCTUS_COMB.pep:*
/cgn2_6/ptodata/2/laa/backfiles1.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GenCore version 4.5 (c) 1993 - 2000 Comp
                                          US-08-482-880-21
US-08-273-274-25
US-08-475-041-21
US-08-335-832-21
US-08-335-832-22
US-08-3484-773-25
US-08-484-773-25
US-08-361-864-25
                                                                                                                                                                                                               US-08-366-665-4
US-08-210-715-11
US-08-366-665-11
                                                                                                                                                                                                                                                                                                              US-08-210-715-1
US-08-210-715-2
                                                                                                                                                                                                                                                   US-08-366-665-2
US-08-366-665-3
                                                                                                                                                                                                                                                                           US-08-210-715-4
US-08-366-665-1
                                                                                                                                                                                                                                                                                                                                                                                      SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (without alignments)
8.524 Million cell updates/sec
                                                      Sequence 21, Appl
Sequence 25, Appl
Sequence 21, Appl
Sequence 21, Appl
Sequence 21, Appl
Sequence 21, Appl
Sequence 22, Appl
Sequence 22, Appl
Sequence 21, Appl
Sequence 21, Appl
Sequence 21, Appl
Sequence 21, Appl
Sequence 25, Appl
Sequence 26, Appl
                                                                                                                                                                                                                                      Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                  Description
                     Sequence
Sequence
Sequence
                                                                                                                                                                                                      Patent
                                                                                                                                                                                                    sequence 11, Appl
Sequence 11, Appl
Patent No. 5330911
                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                         Sequence
            Sequence
                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                      1, Appli
2, Appli
3, Appli
4, Appli
1, Appli
2, Appli
4, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-210-715-J
                                                                      FEATURE:
                                                                                FRAGMENT TYPE:
```

45	44	43	42	41	40	39	38	37	36	ა	34	ω G	32	31	30	29
23	23	23	23	23	23	23	23	23	23	23	23	24	24	26	26	26
69.7	69.7	69.7	69.7	69.7	69.7	59.7	69.7	69.7	69.7	69.7	69.7	72.7	72.7	78.3	78.8	78.3
4	42.	4		4		4	4	4	4	4	4	σ	o	տ	տ	ъ
N	N	2	N	N	N	N	N	ш	μ	-	۳	<u> </u>	<u>-</u>	G	ហ	_
US-08-361-864-28	US-08-753-781-20	US-08-747-137-69	US-08-335-832-25	US-08-623-833B-5	US-08-387-749-10	US-08-669-683-12	US-08-668-871-12	US-08-596-116A-68	US-08-461-611-36	US-08-109-106-6	US-07-932-200-10	US-08-366-665-10	US-08-210-715-10	5330911-6	5330911-3	US-08-234-034-1
Sequence 28, Appl	Sequence 20, Appl	Sequence 69, Appl	Sequence 25, Appl	Sequence 5, Appli				Sequence 68, Appl	Sequence 36, Appl	Sequence 6, Appli	Sequence 10, Appl	Sequence 10, Appl	Sequence 10, Appl	Patent No. 5330911	Patent No. 5330911	Sequence 1, Appli

ALIGNMENTS

```
MEDIUM TYPE: FLOPPY ULIN COMPUTER: IBM PC compatible COMPUTER: PC-DOS/MS-DOS SOFTWARE: PATENTIN Release #1.0, V CURRENT APPLICATION DATA: APPLICATION UNMBER: US/08/210,715 FILING DATE: 18 -WAR-1994 CLASSIFICATION: 514 ATTORNEY/AGENT INFORMATION: NAME: FITTING NUMBER: 34,163 REFERENCE/DOCKET NUMBER: TSRI 419 TELEPHONE: (519) 554-2937 TELEPHONE: (519) 554-6312 INFORMATION FOR ASOLUTION: TELEPHONE: (613) 554-6312 INFORMATION FOR SEQUENCE CHARACTERISTICS: SEQUENCE CHARACTERISTICS: LENGTH: 6 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1, Application US/08210715 Patent No. 5753230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                               TYPE: amino acid
STRANDEDNESS: sinc
TOPOLOGY: linear
MOLECULE TYPE: pepti
HYPOTHETICAL: NO
ANTI-SENSE: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY: USA
ZIP: 92037
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Brooks, Peter
APPLICANT: Cheresh, David A
TITLE OF INVENTION: METHODS AND COMPOSITIONS USEFUL FOR
TITLE OF INVENTION: INHIBITION OF ANGIOGENESIS
NAME/KEY: Peptide LOCATION: 1..6 OTHER INFORMATION: OTHER INFORMATION: OTHER INFORMATION: OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET: 10665 N
CITY: La Jolla
STATE: CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE: Office of Patent Counsel, The Scripps ADDRESSEE: Research Institute STREET: 10665 No. 5753230th Torrey Pines Road, TPC-8
                                                                                                                                                                                                                                               ະຣຣ: single
linear
                                                                                                                                                              internal
                                                                                                                                                                                                                            peptide
/label- BOC-GRGDFV-OMe
/note- "BOC signifies the N-terminal protecting
group butyloxycarbonyl; OMe signifies a C-termin
methyl ester; arginine in the second position
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US/08/210,715
                                                                                                                                                                                                                                                                                                                                                                                                                                                           419.0
                          C-terminal
```

```
Query Match
Best Local Similarity
""" 6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-210-715-2
                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/
FILING DATE: 18-MAR-1994
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                            TELEFAX: (619) 554-63
                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                    MOLECULE TYPE: pe
                                                                                       HYPOTHETICAL: I
                                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION:
                                                                         FRAGMENT TYPE:
                                                                                                                                                                                              SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PPLICANT: Cheresh, ITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY: UZIP: 92037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OTHER INFORMATION:
                                                                                                                                                 TYPE: amino acid
STRANDEDNESS: si
                                                                                                                                                                                                                                                                        REGISTRATION NUMBER: 34,163
REFERENCE/DOCKET NUMBER: TS
                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE:
                               LOCATION:
                                           NAME/KEY:
                                                                                                                                                                                                                                          TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VAME/KEY:
                                                                                                                                                                               ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GRGDFV 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INFORMATION:
 INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION:
                                                                                                                                                                                                                                                                                                 Fitting, Thomas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Application US/08210715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             E: Office of Patent Counsel, The ScrippsE: Research Institute10666 No. 5753230th Torrey Pines Road, T
                                                                                                                                                                               6 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Jolla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Brooks, Peter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                        PatentIn Release #1.0, Version #1.25
                                                                                                                                   linear
                                           Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Peptide
                                                                                                                                                                                                                                          (619)
                                                                                                                                                                                                                                                                                                                                                                                                                                      Floppy disk
                                                                         internal
                                                                                                                   peptide
                                                                                                                                                 single
                                                                                                                                                                                                                         554-6312
                                                                                                                                                                                                                                          554-2937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     David A METHODS AND COMPOSITIONS USEFUL FOR INHIBITION OF ANGIOGENESIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ch Institute
5753230th Torrey Pines Road, TPC-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /label= D-Arg
/note= "A prefix "D" in D-Arg signifies that the arginine in position 2 is a D-amino acid."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              group methyl ester.
/label= BOC
/note= "BOC signifies the N-terminal blocking
                                                                                                                                                                                                                                                                                                                                                              US/08/210,715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /label= OMe
/note= "OMe signifies the C-terminal protecting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 33; DB 1;
Pred. No. 1.3e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

```
ŽQ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-210-715-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-210-715-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                            TELEFAX: (619) 554-631
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             equence 3,
                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: Patentin Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                       MOLECULE TYPE: peptide HYPOTHETICAL: NO ANTI-SENSE: NO
                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION
                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
                                                         FRAGMENT TYPE: internal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                 FILING DATE: 11 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
les 6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION:
                                                                                                                 TOPOLOGY:
                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/08/210,715 FILING DATE: 18-MAR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY: UZIP: 92037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OTHER INFORMATION:
                                                                                                                               STRANDEDNESS:
                                                                                                                                                                                                                         TELEPHONE:
                                                                                                                                                                                                                                                                       REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY:
                               NAME/KEY:
                                                                                                                                                                                                                                                       REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GRGDFV 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 GRGDFV 6
                                                                                                                                                              ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 La Jolia
CA
INFORMATION:
                                                                                                                                               amino acids
                                                                                                                                                                                                                                                                                     Fitting, Ihomas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Application
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10666 No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cheresh,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Peptide
                            Peptide
                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Office of Patent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Research
                                                                                                                                                                                                                           (619)
                                                                                                                                 single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        METHODS AND COMPOSITIONS USEFUL FOR INHIBITION OF ANGIOGENESIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5753230th Torrey Pines Road, TPC-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JS/08210715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     David A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     group tertbutyloxycarbonyl."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       arginine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /label= OH
/note= "OH signifies a free C-terminal carboxylic
acid."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /label= D-Arg
/note= "A prefix "D" in D-Arg signifies that the arginine in position 2 is a D-amino acid."
 /label= H
                                                                                                                                                                                                                                                       TSRI 419.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 33;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Counsel, The Scripps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                          Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
```

0;

*

0

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-210-715-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-210-715-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                  TELEFAX: (619) 554-63.
NFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES: CORRESPONDENCE ADDRESS ADDRESSEE: Office of
                                                                                   HYPOTHETICAL: NO ANTI-SENSE: NO
                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Brooks, Peter
APPLICANT: Cheresh, Davi
                                                                                                                                                                                                                                                                       RELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
                                                                      RAGMENT TYPE:
                                                                                                                    COLECULE TYPE:
                                                                                                                                    TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: circular
                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: PatentIn Release #1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PPLICANT: Cheresh, David A
ITLE OF INVENTION: METHODS AND COMPOSITIONS USEFUL FOR
ITLE OF INVENTION: INHIBITION OF ANGIOGENESIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                         NAME: Fitting, Thomas REGISTRATION NUMBER: 34 REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY: U
ZIP: 92037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STREET: 10666 | CITY: La_Jolla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
nes 6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OTHER INFORMATION: OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OTHER INFORMATION: OTHER INFORMATION:
OTHER INFORMATION: /label- cyclo
                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: FILING DATE: 18-MAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION:
                     NAME/KEY:
                                                                                                                                                                                                                                                         TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GRGDFV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GRGDFV 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      , Application US/08210715 5753230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  E: Research Institute
10666 No. 5753230th Torrey Pines Road, TPC-8
                                                                                                                                                                                      6 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 33; DB 1; llarity 100.0%; Pred. No. 1.3e+05; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                             PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Peptide
                               Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Office of Patent Counsel, The Scripps
                                                                                                                                                                                                                                                           (619)
                                                                                                                                                                                                                                                                                                                                                                            18-MAR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Floppy dis)
                                                                    internal
                                                                                                                      peptide
                                                                                                                                                                                                                                       554-6312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /label- D-Arg
/note- "A prefix "D" in D-Arg at position 2,
signifies that the arginine is a D-amino acid."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note-
acid."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note= "H signifies a free N-terminal amine."
                                                                                                                                                                                                                                                                                                                                                                                            US/08/210,715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /label- OH
                                                                                                                                                                                                                                                                                                       34,163
                                                                                                                                                                                                                       4:
                                                                                                                                                                                                                                                                                            TSRI 419.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "OH signifies a free C-terminal carboxylic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-366-665-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 1, Application US/08366665 Patent No. 5766591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC compation operating SYSTEM: PC-DOS SOFTWARE: Patentin Relector APPLICATION NUMBER: US/OFILING DATE: 30-DEC-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: (619) 554-6312
NFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUX TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                        ACLECTICAL: NAME OF THE PROPERTY OF THE PROPER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 18-MAR-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE: (619) 554-2937
                                                                                                                                                                                                                                                                                                              RAGMENT TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OTHER INFORMATION: OTHER INFORMATION:
                                                                                                                        OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OTHER INFORMATION:
NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: amino acid
STRANDEDNESS: si
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY: UZIP: 92037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: Research
STREET: 10666 No. 5
                                                                                              OTHER INFORMATION:
                                                                                                                                                                                                                      NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGIH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GRGDFV 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GRGDFV 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       La Jolla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Brooks, Peter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cheresh,
                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                             Peptide
1..6
      Peptide
1..6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                  . peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Office of Patent Counsel, The Scripps
                                                                                                                                                                                                                                                                                                              internal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-DEC-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   METHODS AND COMPOSITIONS USEFUL FOR INHIBITION OF ANGIOGENESIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ch Institute
5766591th Torrey Pines Road, TPC-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 David A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note= "Cyclo signifies a cyclic peptide; lower case letters indicate a D-amino acid; capital letters indicate a L-amino acid."
                                                                                                                     /label= BOC-GRGDFV-OMe
/note= "BOC signifies the N-terminal protecting
group butyloxycarbonyl; OMe signifies a C-terminal
                                                                                           methyl ester;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Release #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US 08/210,715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US/08/366,665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        34,163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TSRI 419.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 33; DB 1;
Pred. No. 1.3e+05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Version #1.25
                                                                                              arginine in the second position
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
```

OTHER INFORMATION:

/label- OMe

```
US-08-366-665-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-366-665-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
                                                                                                                                                                                                                                                         REFERENCE/DOCKET NUMBER: TSR:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619) 554-2937
TELEFAX: (619) 554-5312
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
                                                                                                                                MOLECULE TYPE: |
HYPOTHETICAL: NO
ANTI-SENSE: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tent No.
                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/210,715
FILING DATE: 18-AMR-1994
ATTORNEY/AGENT INFORMATION:
NAME: Fitting, Thomas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ZIP: 92037
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Brooks, Peter
APPLICANT: Cheresh, David A
TITLE OF INVENTION: METHODS
TITLE OF INVENTION: INHIBIT:
     NAME/KEY: Peptide LOCATION: 1..6
OTHER INFORMATION: OTHER INFORMATION: OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES: 1
                                                                                                                 RAGMENT TYPE:
                                                                                                                                                                                                                          TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OTHER INFORMATION:
OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/0 FILING DATE: 30-DEC-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OTHER INFORMATION: OTHER INFORMATION:
                                                                                                                                                                                                   STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION: 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity les 6; Conserv
                                                                                                                                                                                      IOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                       REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE: Office of Patent Counsel, The Scripps
ADDRESSEE: Research Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GRGDFV 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Application US/08366665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10666 No. 5766591th Torrey Pines Road, TPC-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Jolla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Peptide
                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Floppy disk
                                                                                                                 internal
                                                                                                                                                                     peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 33; 100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     METHODS AND COMPOSITIONS USEFUL FOR INHIBITION OF ANGIOGENESIS
/label= BOC /note= "BOC signifies the N-terminal blocking group tertbutyloxycarbonyl."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /label= D-Arg
/note= "A prefix "D" in D-Arg signifies that the
arginine in position 2 is a D-amino acid."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note- "OMe signifies the C-terminal protecting group methyl ester." \,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               us/08/366,665
                                                                                                                                                                                                                                                                                                                                                                   34,163
                                                                                                                                                                                                                                                                                                                                                   TSRI 419.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .3e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
"-+-hes 6; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-366-665-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 3, Application US/08366665 Patent No. 5766591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                           TELEFAX: (619) 554-631
NFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM PC COMPATIBLE

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PATENTIA RC-BASE #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/366,665

FILING DATE: 30-DEC-1994

CLASSIFICATION: 424

CLASSIFICATION: 424
                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/210,715
FILING DATE: 13-MAR-1994
ATTORNEY/AGENT INFORMATION:
NAME: Fitting, Thomas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                          MOLECULE TYPE: P
                                                                                                                                            SEQUENCE CHARACTERISTICS:
LENGTH: 6 amino acids
                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER: TS
TELECOMMUNICATION INFORMATION:
                                                ANTI-SENSE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Brooks, Peter
                              RAGMENT TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: Research Institute STREET: 10666 No. 5766591th To CITY: La Jolla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY: UZIP: 92037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                            STRANDEDNESS:
                                                                                                                                                                                                             TELEPHONE:
                                                                                                                                                                                                                                                           NAME: Fitting, Thoma REGISTRATION NUMBER:
NAME/KEY: Peptice
                                                                                               TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE: Office of Patent Counsel, The Scripps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 GRGDFV 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CA
USA
                                                                                                                              amino acid
                                                                                                                                                                                              (619)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Peptide
                                                                                                                                                                                                             (619)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Floppy disk
                                                                            peptide
                                                                                                            single
                                                                                                                                                                          9) 554
554-6312
-- NO: 3:
                                                                                                                                                                                                              554-2937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                David A METHODS AND COMPOSITIONS USEFUL FOR INHIBITION OF ANGIOGENESIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /label= D-Arg
/note= "A prefix "D" in D-Arg signifies that the arginine in position 2 is a D-amino acid."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /label= OH
/note= "OH signifies a free C-terminal carboxylic
acid."
                                                                                                                                                                                                                                                          34,163
                                                                                                                                                                                                                                              TSRI 419.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 33; DB 1;
Pred. No. 1.3e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Torrey Pines Road, TPC-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
```

```
Query Match
Best Local Similarity
Thehes 6; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 8
US-08-366-665-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-366-665-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 4, Application US/08366665 Patent No. 5766591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
APPLICANT: Brooks, I
APPLICANT: Cheresh,
                 TYPE: amino acid
STRANDEDNESS: sing
TOPOLOGY: circular
MOLECULE TYPE: pepti
                                                                                                  TELEFAX: (619) 554-631
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tent No.
                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                            REGISTRATION NUMBER: 34,163
REFERENCE/DOCKET NUMBER: TELECOMMUNICATION INFORMATION:
TELEPHONE: (619) 554-2937
                                                                                                                                                                                                                                                                                                                                                                                                                                      AUC...
STREET: 100.
CITY: La Jolla
CTATE: CA
                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/210,715
FILING DATE: 18-MAR-1994
ATTORNEY/AGENT INFORMATION:
          HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCATION:
OTHER INFO
                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: FILING DATE: 30-DE CLASSIFICATION: 42
                                                                                                                                                                                                           NAME: Fitting, Thomas
                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OTHER INFORMATION: OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: Research Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GRGDFV 6
                                                                                       ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                      92037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION:
INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ION: 1..6
INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                E: Research Institute
10666 No. 5766591th Torrey Pines Road, TPC-8
                                                                                      6 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                    USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Brooks, Peter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
ĕ
                                          circular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Peptide
       . peptide
                                                                                                                                                                                                                                                                                               30-DEC-1994
                                                        single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          METHODS AND COMPOSITIONS USEFUL FOR INHIBITION OF ANGIOGENESIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         David A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /label- D-Arg
/note- "A prefix "D" in D-Arg at position
signifies that the arginine is a D-amino a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /label= OH
/note= "OH signifies a free C-terminal carboxylic
acid."
                                                                                                                                                                                                                                                                                                                 US/08/366,665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /label-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                             TSRI 419.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "H signifies a free N-terminal amine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 33;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                          Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1.3e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
```

```
Query Match
Best Local Similarity
6; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 9
US-08-210-715-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-366-665-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 11, Appli
Patent No. 5753230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
APPLICANT: Brooks, I
APPLICANT: Cheresh,
                                                                                                                                                                                                                                                                TELEFAX: (619) 554-63 INFORMATION FOR SEQ ID NO:
                                                                                                                                          TYPE: amino acid
STRANDEDNESS: Sinc
TOPOLOGY: circulal
MOLECULE TYPE: peptl
HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                            REGISTRATION NUMBER: 34,163
REFERENCE/DOCKET NUMBER: TS
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FRAGMENT TYPE: 'internal FEATURE:
                                                                                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS
OTHER INFORMATION:
OTHER INFORMATION:
OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                                FRAGMENT TYPE:
                                                                                                                                ANTI-SENSE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE: Office or representations and anomessee: Research Institute ADDRESSEE: Research Institute STREET: 10665 No. 5753230th Torrey Pines Road, TPC-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/0
FILING DATE: 18-MAR-1994
                                                                                                                                                                                                                                                                                             TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY:
                                                                                NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GRGDEV 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GRGDFV 6
                                                                                                                                                                                                                             ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              La Jolia
:: CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 92037
                                                                                                                                                                                                                                                                                                                                                            Fitting, Thomas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Application US/08210715
                                                                                                                                                                                                                               6 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Brooks, Peter
                                                                                                                                                                              circular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IBM PC compatible
SYSTEM: PC-DCS/MS-DOS
                                                                                Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Peptide
                                                                                                                                                                                                                                                                                           (619)
                                                                                                                internal
                                                                                                                                                                                               single
                                                                                                                                                             peptide
                                                                                                                                                                                                                                                                                              554-2937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            David A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             METHODS AND COMPOSITIONS USEFUL FOR INHIBITION OF ANGIOGENESIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /label ryclo signifies a cyclic peptide; lower /note "Cyclo signifies a cyclic peptide; lower case letters indcate a D-amino acid; capital letters indicate a L-amino acid."
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Release #1.0,
/label-cyclo /label-cyclo signifies a cyclic peptide; lower /note- "Cyclo signifies a cyclic peptide; lower case letters indicate a L-amino acid."
                                                                                                                                                                                                                                                                                                                                                                                                                              US/08/210,715
                                                                                                                                                                                                                                                                                                                                           34,163
                                                                                                                                                                                                                                                                                                                               TSRI 419.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 33;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1.3e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
5; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-366-665-11
                                                                                                                 US-08-366-665-11
                                           Best Loc
Matches
                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 11,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US/08/
FILING DATE: 30-DEC-1994
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/
FILING DATE: 18-MAR-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                        TELEPHONE: (619) 554-29:
TELEFAX: (619) 554-6312
INFORMATION FOR SEQ ID NO: 1
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                             MOLECULE TYPE:
HYPOTHETICAL:
ANTI-SENSE: NO
                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER: TS.
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Brooks, Peter APPLICANT: Cheresh, Davi
                                                                                                                                                                                                                                FRAGMENT TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET: 100 CTTY: La Jolla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION:
1 GRGDFV 6
                                           Local Similarity 83.1
                                                                                                                                                         OTHER INFORMATION:
                                                                                                                                                                       OTHER INFORMATION:
                                                                                                                                                                                      NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |||||:
1 GRGDFL
                                                                                                                                                                                                                                                                                       TOPOLOGY:
                                                                                                                                                                                                                                                                                                   STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                     REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                                                                                                                                                                                               ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GRGDFV 6
                                                                                                                                                                                                                                                                                                                  amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                              Fitting, Thomas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Application US/08366665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       E: Research Institute
10666 No. 5766591th Torrey Pines Road, TPC-8
                                                                                                                                                                                                                                                                                                                               6 amino acids
                                                                                                                                                                                                                                                                                  ESS: single
circular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 USA
                                                                                                                                                                                                  Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                      . peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Office of Patent Counsel, The Scripps
                                                                                                                                                                                                                                internal
                                                       90.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           David A METHODS AND COMPOSITIONS USEFUL FOR INHIBITION OF ANGIOGENESIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              90.98;
                                                                                                                            /label= cyclo /note= "Cyclo signifies a cyclic peptide; lower case letters indicate a D-amino acid; capital letters indicate a L-amino acid."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US 08/210,715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US/08/366,665
                                                                                                                                                                                                                                                                                                                                                                                                                                34,163
                                                                                                                                                                                                                                                                                                                                                                                                                      TSRI 419.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 30;
Pred. No.
                                         Score 30; DB 1; Le
Pred. No. 1.3e+05;
1; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 1; I
1.3e+05;
                                                                    Length 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                         0
                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                           0
```

```
RESULT 11
5330911-13
;Patent No. 5330911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-482-880-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5330911-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
APPLICATION UMBER: 414,144
FILING DATE: 28-SEP-1989
SEQ ID NO:13:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NEIL
US-08-482-830-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADHESIVE EFFECTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 5; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 21, Application US/08482880 Patent No. 5736122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                             TELEFAX: 312-715-1234
TELEX: 910-221-5317
INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                           COMPUTER: IBM PC COMPATIBLE

OPERATING SYSTEM: PC-DOS/MS-DOS

SOSTWARE: PATENTIA RELEASE #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/482,880

FILING DATE: 07-UN-1395

CLASSIFICATION: 424

CLASSIFICATION: 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Lister-James, John
TITLE OF INVENTION: Technetium-99m Labeled Peptides for
TITLE OF INVENTION: Thrombus Imaging
NUMBER OF SEQUENCES: 33
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/527,198
FILING DATE: 21-MAY-1990
                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
NAME: NO. 5736122nan, Kevin
REGISTRATION NUMBER: 35,303
                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: HUBBELL, JEFFREY A.; MASSIA, STEPHEN P.; DESAI,
                                                                                                                                                    TELECOMMUNICATION INFORMATION: TELEPHONE: 312-715-1000
                MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES: 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: SURFACES HAVING DESIRABLE CELL
                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET: 10 Sou
CITY: Chicago
STATE: Illinoi
                             TYPE: amino acid
                                                                                                                       TELEPHONE: 312-715-1234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 5
                                                                                                                                                                                           REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GRGDF
                                                                ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GRGDF 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GRGDFL 6
                                                                                                                                                                                                                                                                                                                                                                                                                           60606
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Illinois
                                                                    6 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            E: Banner & Allegretti, Ltd.
10 South Wacker Drive Suite 3000
                                                                                                                                                                                                                                                                                                                                                                                                                                            USA .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Dean, Richard T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
              peptide
                                                                                                                                                                                                                            Kevin E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 29;
Pred. No.
                                                                                                                                                                                           92,216-L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1.3e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
```

밁

Matches

State of Property.

```
US-08-273-274-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-482-880-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-482-880-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
                                                                                                                                                                                         Sequence 21, Application US/08273274 Patent No. 5849260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Patent No. 573612
                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEX: 910-221-5317
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION DATA:
APPLICATION US/O8/482,880
FILING DATE: 07-UN-1995
CLASSIFICATION: 424
CCASSIFICATION: 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY AGENT INFORMATION:
NAME: NO. 5736122nan, Kevin
REGISTRATION NUMBER: 35,303
                              TITLE OF INVENTION: Technetium-99m Latitle OF INVENTION: Thrombus Imaging NUMBER OF SEQUENCES: 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE/DOCKET NUMBER: 92
TELECOMMUNICATION INFORMATION:
                                                                                                         APPLICANT: Dean, Richard T
APPLICANT: Lister-James, John
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: Technetium-99m Labeled Peptides for ITTLE OF INVENTION: Thrombus Imaging
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Dean, Richard T
APPLICANT: Lister-James, John
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES:
           ORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity hes 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 6 amino a TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET: 10 South
CITY: Chicago
STATE: Illinois
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
nes 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                               1 GRGDF 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GRGDF 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Application US/08482880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      E: Banner & Allegretti, Ltd.
10 South Wacker Drive Suite 3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          87.9%; Score 29;
100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             87.9%;
                                                                                   Technetium-99m Labeled Peptides for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kevin E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 29; pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              92,216-L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1.3e+05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1.3e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 15
US-08-273-274-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
"hes 5; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; TOPOLCGY: linear; MOLECULE TYPE: peptide US-08-273-274-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICALL.

APPLICATION: 436

CLASSIFICATION: 436

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/886,752

APPLICATION NUMBER: US 07/886,752

FILING DATE: 21-MAY-1992

ATTORNEY/AGENT INFORMATION:

NAME: NO. 5849260nan, Kevin E

NAME: NO. 584926
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: 312-715-1234
TELEX: 910-221-5317
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 6 emino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Patent No. 5849260
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 25, Apprix
Sequence 25, Apprix
APPLICATION NUMBER: US/08,
FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07,
FILING DATE: 21-MAY-1992
                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                            STREET: LUCITY: Chicago
CITY: Chicago
TMATE: Illinois
TMSA
                                                                                                                                                           COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES: 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELECOMMUNICATION INFORMATION:
TELEPHONE: 312-715-1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: Technetium-99m L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE: 312-715-1234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE: Allegretti & Witcoff, Ltd.
STREET: 10 South Wacker Drive Suite 3000
CITY: Chicago
STAIE: Illinois
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 GRGDF 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GRGDF 5
                                                                                                                                                                                                                                                                                                                              60606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Application US/08273274
                                                                                                                                                                                                                                                                                                                                                                                                                               E: Allegretti & Witcoff, Ltd.
10 South Wacker Drive Suite 3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Lister-James,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Dean, Richard T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Technetium-99m Labeled Peptides for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               87.9%; Score 29; DB
100.0%; Pred. No. 1.
Live 0; Mismatches
                        us 07/886,752
                                                                                                                                       US/08/273,274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             John
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1.3e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
```

0;

Gaps

0

Matches

```
ATTORNEY/AGENT INFORMATION:

NAME: NO. 5849260nan, Kevin E

REGISTRATION NUMBER: 35,303

REFERENCE/DOCKET 35,303

REFERENCE/DOCKET NUMBER: 92,216

TELECOMMUNICATION INFORMATION:

TELEPHONE: 312-715-1200

TELEFAX: 312-715-1200

TE
```

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Post-processing: Minimum Match
Maximum Match
Listing first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Minimum DB seq length: 0
Maximum DB seq length: 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PIR_66:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-081-522-4
33
1 GRGDFV 6
            March 6, 2001, 09:42:22; Search time 13.62 Seconds (without alignments) 29.912 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         195891 seqs, 67900655 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd
               DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                h 0%
h 100%
t 45 summaries
         P10629
P10639
P10629
P10514
P40514
P40689
P10711
P40689
P10514
P10690
P10531
P10690
P10573
P10690
P10677
P10657
P10657
P10657
P10657
P10657
P10658
P10690
P10658
P10690
P10658
P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       315
T-cell receptor be Afric T-cell receptor be neuropetide GNFFR T-cell receptor be cholecystokinin-5 photosystem I 10.4 fullcin - giant A fu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Description
```

ρ. γο

GRG

H4 histone - African clawed frog (fragment) C:Species: Xenopus laevis (African clawed frog) C:Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 21-Jul-2000 C;Accession: I51434 R;Woodland, H.R; Warmington, J.R.; Ballantine, J.E.M.; Turner, P.C. Nucleic Acids Res. 12, 4939-4958, 1984 A;Title: Are there major Gevelopmentally regulated H4 gene classes in Xenopus?. A;Reference number: I51391; MUID:84247348 A;Accession: I51434 A;Reference number: translated from GB/EMBL/DDBJ A;Accession: I51434 A;Residues: preliminary; translated from GB/EMBL/DDBJ A;Residues: 1-6 <wood 0:="" 0;="" 0;<="" 100.0%;="" 2e+05;="" 3;="" a;cross-references:="" best="" conservative="" gaps="" gb:ko2304;="" indels="" local="" match="" matches="" mismatches="" nid:g214227;="" no.="" pid:g555517="" pidn:aaa49738.1;="" pred.="" query="" similarity="" th=""><th>r beta chain V-D-J region (120-2CF) - mouse (fragment) musculus (house mouse) 1992 #sequence_revision 17-Jul-1992 #text_change 30-May.1997 [6608] 14, 115-124, 1991</th><th>30 11 33.3 4 2 S47552 ubiquitin - rat 31 11 33.3 5 2 C23751 spinal cord peptid 32 11 33.3 5 2 B61168 primase - Citrobac 33 11 33.3 5 2 S53595 hypothetical prote 35 11 33.3 5 2 C53284 T-cell receptor be 37 11 33.3 5 2 PT0525 T-cell receptor be 38 11 33.3 5 2 PT0553 T-cell receptor be 39 11 33.3 5 2 PT0553 T-cell receptor be 40 11 33.3 5 2 PT0695 T-cell receptor be 41 13 3.3 5 2 PT0700 T-cell receptor be 42 11 33.3 6 2 PT0686 T-cell receptor be 43 11 33.3 6 2 PT0686 T-cell receptor be 44 11 33.3 6 2 PT0666 T-cell receptor be 45 11 33.3 6 2 PT0666 T-cell receptor be 46 11 33.3 6 2 PT0667 T-cell receptor be 47 11 33.3 6 2 PT0668 T-cell receptor be 48 11 33.3 6 2 PT0668 T-cell receptor be 49 T-cell receptor be</th></wood>	r beta chain V-D-J region (120-2CF) - mouse (fragment) musculus (house mouse) 1992 #sequence_revision 17-Jul-1992 #text_change 30-May.1997 [6608] 14, 115-124, 1991	30 11 33.3 4 2 S47552 ubiquitin - rat 31 11 33.3 5 2 C23751 spinal cord peptid 32 11 33.3 5 2 B61168 primase - Citrobac 33 11 33.3 5 2 S53595 hypothetical prote 35 11 33.3 5 2 C53284 T-cell receptor be 37 11 33.3 5 2 PT0525 T-cell receptor be 38 11 33.3 5 2 PT0553 T-cell receptor be 39 11 33.3 5 2 PT0553 T-cell receptor be 40 11 33.3 5 2 PT0695 T-cell receptor be 41 13 3.3 5 2 PT0700 T-cell receptor be 42 11 33.3 6 2 PT0686 T-cell receptor be 43 11 33.3 6 2 PT0686 T-cell receptor be 44 11 33.3 6 2 PT0666 T-cell receptor be 45 11 33.3 6 2 PT0666 T-cell receptor be 46 11 33.3 6 2 PT0667 T-cell receptor be 47 11 33.3 6 2 PT0668 T-cell receptor be 48 11 33.3 6 2 PT0668 T-cell receptor be 49 T-cell receptor be
00 opus	7 N	ST Dee e e e e e e e e e e e e e e e e e

```
C;Accession: A43129
R;Maule, A.; Shaw, C.; Halton, D.; Thim, L.
Biochem. Biophys. Res. Commun. 193, 1054-1060, 1993
A;Title: GNFFRFamide: A novel FMRFFamide-immunoreactive peptide isolated from A;Reference number: A43129; MUID:93312289
A;Accession: A43129
                                                                                                          neuropeptide GNFFRFamide - tapeworm (Moniezia expansa)
C:Species: Moniezia expansa
C:Date: 10-Nov-1997 #sequence_revision 14-Nov-1997 #text_change
C:Accession: A43129
                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                               J. Exp. Med. 174, 115-124, 1991
A; Title: Junctional sequences of fetal T.
A; Reference number: PT0509; MUID:91277601
A; Accession: PT0514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  J. Exp. Med. 174, 115-124, 1991
A;Title: Junctional sequences of fetal T cell
A;Reference number: PT0509; MUID:91277601
A;Accession: PT0629
A;Status: translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R; Feeney,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R; Feeney,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Experimental source: adult thymus, C; Keywords: T-cell receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: mRNA
A; Residues: 1-6 <FEE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Status: translation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Molecule type: mRNA
A; Residues: 1-6 <FE2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Accession: PT0528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Experimental source: newborn thymus,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -cell receptor beta chain V-D-J region (100-2AH) - mouse (fragment)
;Species: Mus musculus (house mouse)
;Date: 17-Jul-1992 #sequence_revision 17-Jul-1992 #text_change 30-M
;Accession: pT0629; pT0528
;Molecule type: protein ;Residues: 1-6 <MAU>
                                                                                                                                                                                                                                                                                                                                                                                 Experimental source: adult thymus, strain BALB/c: Reywords: T-cell receptor
                                                                                                                                                                                                                                                                                                                                                                                                                    ;Molecule type: mRNA Residues: 1-6 <FEE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;Species: Mus musculus (house mouse);Date: 17-Jul-1992 #sequence_revision;Accession: PT0514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -cell receptor beta chain V-D-J region (100-4AC) -
                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                      Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Status: translation not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
nes 2; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3 GDF 5
11:
3 GDW 5
                                                                                                                                                                                                                                           4
GQG
                                                                                                                                                                                                                                                                         1 GRG 3
                                                                                                                                                                                            G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A.J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A. J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1-6 <FEE>
                                                                                                                                                                                                                                                                                                     Similarity
2; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                  not shown
                                                                                                                                                                                                                                                                                                                      39.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           39.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 13;
Pred. No.
1; Mismatc
                                                                                                                                                                                                                                                                                                                    Score 13; DB 2;
Pred. No. 2e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        strain
                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      strain BALB/c, clone 100-2AH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  17-Jul-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 2;
2e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BALB/c,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          receptor beta chains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    receptor beta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #text_change 30-May-1997
                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #text_change 30-May-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ç,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mouse (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        clone 100-4AB
                                                                                                                                                                                                                                                                                                                                     Length 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      chains
                                                                                                                              14-Nov-1997
                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  have
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      have
                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      few
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    few
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      z
                                                               the
                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  regions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      regions.
                                                               ceeus
                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Status: translation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
               A; Accession:
                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: DNA
A; Residues: 1-4 <FE5>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Molecule type: mRNA
A; Residues: 1-4 <FE4>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Experimental source: A; Accession: PT0570 .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type: DNA
A; Residues: 1-4 <FE3>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Experimental source:
A; Accession: PI0678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Molecule type: mRNA
A; Residues: 1-4 <FE1>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      I.-CeTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Status: translation not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type:
A; Residues: 1-4 •
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Experimental source: A; Accession: PT0674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R; Feeney,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Status:
                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3 GDF 5
|:|
1 GNF 3
                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                         ა
ც __
                                                                                                                                                                                                                                                                         3 GD 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               translation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
2; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1-4 <FE2>
                                                                                                                                                                                                                                                                                                       Similarity 2; Conserv
```

```
RESULT 7
A33516
cholecystokinin-5 - dog
cholecystokinin-5 - dog
N;Alternate names: CCK-5
C;Species: Canis lupus familiaris (dog)
C;Species: Canis lupus familiaris (dog)
C;Accession: A32516
C;Accession: A32516
R;Shively, J; Reeve Jr., J.R.; Eysselein, V.E.; Ben-Avram, C.; Vigna, S.R.,
Am. J. Physiol. 252, G272-G275, 1987
A, Title: CCK-5: sequence analysis of a small cholecystokinin from canine brank, Reference number: A32516; MUID:87153871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C;Species: Mus musculus (house mouse)
C;Date: 17-Jul-1992 #secuence_revision 17-Jul-1992 #text_change 30-May-1997
C;Accession: PI0607; PI0674; PI0678; PI0570; PI0711; PI0710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Title: Junctional sequences of fetal T cell receptor beta chains have A;Reference number: PT0509; MUID:91277601
A;Accession: PT0607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C;Reywords: amidated carboxyl end; reuropeptide
F;6/Modified site: amidated carboxyl end (Phe) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Experimental source: newborn thymus, strain BALB/c C; Keywords: T-cell receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Experimental source: day 19 fetal A; Accession: PT0711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Status: translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                . Exp. Med. 174, 115-124, 1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Status: translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              beta chain V-D-J region (120-2J) - mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           newborn thymus,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cay 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           day 18 fetal
                                                                                                                                                                                                                                                                                                                                                            36.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 39.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              fetal
                                                                                                                                                                                                                                                                                                                                         Score 12; DB; Pred. No. 2e+
0; Mismatches
                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 13; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         thymus,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            thymus, strain BALB/c,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          thymus,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           strain BALB/c,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 2;
2e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             strain BALB/c,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              strain
                                                                                                                                                                                                                                                                                                                                                                                DB 2;
                                                                                                                                                                                                                                                                                                                                                            2e+05;
                                                             Ben-Avram, C.; Vigna, S.R.; Walsh,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BALB/c,
                                                                                                                                                                                                                                                                                                                                                                              Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                          (clones 161-2AE
                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              141-1I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             140-1G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              154-1L
                          from canine brain
                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                            and 161-2AF)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              few N regions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                           0;
                          and
```

ı,

the five carboxyl-terminal residues of cholecysto

```
A; Residues: 1-5 <SHI>C; Comment: This peptide corresponds to the five carboxyl-terminal rC; Comment: This peptide corresponds to the five carboxyl-terminal rC; Superfamily: gastrin C; Keywords: amidated carboxyl end; neuropeptide c; Keywords: amidated carboxyl end (Phe) #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R;Obokata, J.; Mikami, K.; Hayashida, N.; Nakamura, M.; Sugiura, Plant Physiol. 102, 1259-1267, 1993
A;Title: Molecular heterogeneity of photosystem I. psaD, psaE, pa;Reference number: PQ0667; MUID:94105345
A;Accession: PQ0689
                                                         RESULT
B61445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Molecule type: protein
A;Residues: 1-5 <080>
C;Keywords: chloroplast; photosynthesis; photosystem
Leu-enkephalin - blue mussel
C;Species: Mytilus edulis (blue mussel)
C;Date: 07-Oct-1994 #sequence_revision 07-Oct-1994 #text_change 21-Jan-2000
                                                                                                                                  밁
                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                 C;Accession: A44692
R;Ohta, N.; Kubota, I.; Takao, T.; Shimonishi, Y.; Yasuda-Kamatani, Y.; Minakata, H.; Nestochem. Biophys. Res. Commun. 178, 486-493, 1991
A;Title: Fulicin, a novel neuropeptide containing a D-amino acid residue isolated from A;Reference number: A44692; MUID:91315471
A;Accession: A44692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           photosystem I 10.4K H1 chain - common tobacco (fragment)
C;Species: Nicotiana tabacum (common tobacco)
C;Date: 19-may-1994 #sequence_revision 19-may-1994 #text_change 17-mar-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                              A;Molecule type: protein A;Residues: 1-5 <OHT> C;Keywords: amidated carl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  fulicin - giant African snail
C:Species: Achatina fulica (giant African snail)
C:Date: 23-Mar.1995 #sequence_revision 05-Apr-1995 #text_change 11-Jul-1997
                                                                                                                                                                                                     Query Match
Best Local S
Matches
                                                                                                                                                                                                                                                                                       Keywords: amidated carboxyl end; D-amino acid; neuropeptide; 2/Modified site: D-asparagine (Asn) #status experimental; 5/Modified site: amidated carboxyl end (Val) #status experi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4 DF 5
                                                                              10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            - g
- 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        G
                                                                                                                                                                  DFV 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DF.
                                                                                                                                  EFΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             h 36.4%;
Similarity 100.0%;
2; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                        Similarity
                                                                                                                                . ເກ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              36.4%;
                                                                                                                                                                                                                      36.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 12;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 12;
Pred. No.
                                                                                                                                                                                                                      Score 12; DB 2;
Pred. No. 2e+05;
                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 2;
2e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      psaD, psaE, psaF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 5;
                                                                                                                                                                                                                                     Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ij,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                           experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   thylakoid
                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ?
                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          psaH and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        psaL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               융
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
```

```
J. Exp. Med. 174, 115-124, 1991
A; Title: Junctional sequences of
A; Reference number: PT0509; MUID:
A; Accession: PT0513
                                                                                                                                                                                                                                                                                                                  T-cell receptor beta chain V-D-J region (100-4AL) - C;Species: Mus musculus (house mouse)
C;Date: 17-Jul-1992 #sequence_revision 17-Jul-1992 #
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R:Leung, M.K.; Stefano, G.B. Proc. Natl. Acad. Sci. U.S.A. 81, 955-958, A;Title: Isolation and identification of er A;Reference number: A61445; MUID:84144823 A;Accession: A61445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Proc. Natl. Acad. Sci. U.S.A. 81, 955-958, A; Title: Isolation and identification of e. A; Reference number: A61445; MUID:84144823
                                                                          A; Experimental source: newborn thymus, C; Keywords: T-cell receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Experimental source: pedal ganglia C; Keywords: neuropeptide; opioid peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT
A61445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C; Keywords: neuropeptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R; Leung,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C; Accession: B61445
                                                                                                      A; Molecule type: mRNN
A; Residues: 1-5 <FE2>
                                                                                                                               A;Experimental source: adult thymus, strain.BALB/c, clone 100-4ALA;Scatus: Franslation not shown
                                                                                                                                                                                A; Molecule type: mRNA
A; Residues: 1-5 <FEE>
                                                                                                                                                                                                             A; Status: translation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Molecule type: prot
A; Residues: 1-5 <LEU>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Met-enkephalin -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Experimental source:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Molecule type: protein
A; Residues: 1-5 <LEU>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Accession: B61445
                                                                                                                                                                                                                                                                                       R; Feeney,
Query Match
Best Local
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ;Species: Mytilus edulis (blue mussel);Date: 07-Oct-1994 #sequence_revision
                                                                                                                                                                                                                                                                                                     Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Accession: A61445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
                                                                                                                                                                                                                                                                                                                                                                                                                               N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N
                                                                                                                                                                                                                                                                                                                                                                                                                                                             3 GDFV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3 GDFV 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          M. K.
                                                                                                                                                                                                                                                                                                                                                                                                                               GGFM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGFL '5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity 2; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
Similarity
2; Conserv
                                                                                                                                                                                                                                                                                                       PT0513;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ν,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Stefano,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   blue mussel
                                                                                                                                                                                                                                                                                                       PT0606
                                                                                                                                                                                                              not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               pedal ganglia
le; opioid peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ഗ
പ
              36.4%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      36.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         35.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 12;
Pred. No.
1; Mismatc
Score 12; DB; Pred. No. 2e+
0; Mismatches
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 12;
Pred. No.
                                                                                                                                                                                                                                                         fetal T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                        strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       07-Oct-1994 #text_change 21-Jan-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8, 1984
enkephalins in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8, 1984
enkephalins
                                                                                                                                                                                                                                                            cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 2;
2e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 2;
2e+05;
              DB 2;
2e+05;
                                                                                        BALB/c,
                                                                                                                                                                                                                                                           receptor beta chains have
 0
                                                                                                                                                                                                                                                                                                                     #text_change 30-May-1997
                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'n
                                                                                          clone 120-1S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            pedal ganglia of Mytilus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pedal ganglia of Mytilus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                            few
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                            regions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              edul
```

Conservative

Indels

0

Gaps

```
Query Match
Best Local Similarity
""" 2; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              J. Exp. Med. 174, 115-124, 1991
A;Title: Junctional sequences of fetal T cell receptor beta chains have few N regions.
A;Reference number: PT0509; MUID:91277601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                    밁
                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
PT0703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
RESULT 15 PT0690 T_{j'}cell receptor beta chain V-D-J region (1¢0-1BD) - mouse (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Experimental source: newborn thymus, strain BALB/c, clone 100-2ACC;Keywords: T-cell receptor
                                                                                                                                                                                                                                                                               C; Keywords: T-cell receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Molecule type: mRNA
A;Residues: 1-5 <FE2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       r-cell receptor beta chain V-D-J region (135-1F) - mouse (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Molecule type: mRNA
A;Residues: 1-5 <FE3>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Status: translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1;Status: translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -cell receptor beta chain V-D-J region (126-1F) - mouse (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                        l; Feeney, A.J
                                                                                                                                                                                                                                                                                                                                                                            Exp. Med. 174, 115-124, 1991
Fittle: Junctional sequences of fetal T cell receptor beta chains have few N regions. Reference number: PT0509; MUID:91277601
Recession: PT0703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;Species: Mus musculus (house mouse);Date: 17-Jul-1992 #text_change 30-May-1997;Date: 17-Jul-1992 #sequence_revision 17-Jul-1992 #text_change 30-May-1997;Accession: PT0703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Experimental source: day 18 fetal thymus, strain BALB/c, clone 126-15 Accession: PT0539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;Species: Mus musculus (house mouse)
;Date: 17-Jul-1992 #sequence_revision 17-Jul-1992 #text_change 30-May-1997
;Accession: PT0538; PT0539; PT0603
                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                    ;Molecule type: DNA
;Residues: 1-5 <FEE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Status: translation not shown
                                                                                                                                                                                                                                                                                                  Experimental source: newborn thymus, strain BALB/c
                                                                                                                                                                                                                                                                                                                                                            Status: translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Experimental source: day 18 fetal thymus, strain BALB/c, Accession: PT0603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Molecule type: mRNA
                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3 GD 4 .
3 GD 4
                                                                                                                                                                             Match 36.4%; Score 12; DB Local Similarity 100.0%; Pred. No. 2e les 2; Conservative 0; Mismatches
                                                                                                  3 GD 4
3 GD 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8=8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1-5 <FEE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      36.4%; Score 12; DB 2; ilarity 100.0%; Pred. No. 2e+05; Conservative 0; Mismatches
                                                                                                                                                                        DB 2;
o. 2e+05;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 5;
                                                                                                                                                                                                                    Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        clone 126-13
                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
```

```
J. Exp. Med. 174, 115-124, 1991
A;Title: Junctional Sequences of fetal T cell receptor beta chains have few N regions A;Reference number: PT0509; MUID:91277601
A;Accession: PT0690
A;Status: translation not shown
                                                                                     밁
                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                            C;Species: Mus musculus (house mouse)
C;Date: 17-Jul-1992 #sequence_revision 17-Jul-1992 #text_change 30-May-1997
Search completed:
Job time: 49 sec
                                                                                                                                                                                                                                        C; Keywords: T-cell receptor
                                                                                                                                                                                                                                                       A; Experimental source: day 18 fetal thymus, strain BALB/c
                                                                                                                                                                                                                                                                          A; Molecule type: DNA
A; Residues: 1-5 < FEE>
                                                                                                                                                                                                                                                                                                                                                                                            R; Feeney,
                                                                                                                                                                                                                                                                                                                                                                                                                 C; Accession:
                                                                                                                                                     Query Match
Best Local Similarity
Matches 2; Conserv
                                                                                   3 GD 4
3 GD 4
                                                                                                                                                       Conservative
                   March
                                                                                                                                                 36.4%; 500
100.0%; Pr/
0;
                   6, 2001, 09:43:11
                                                                                                                                                                        Score 12;
Pred. No.
                                                                                                                                                          Mismatches
                                                                                                                                                                       DB 2;
2e+05;
                                                                                                                                                          0,
                                                                                                                                                                                        Length 5;
                                                                                                                                                          Indels
                                                                                                                                                          0,
                                                                                                                                                          Gaps
                                                                                                                                                          0
```

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Minimum DB seq length: 0 Maximum DB seq length: 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score
                                                                          Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query
                                                                                                          1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

1300

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SwissProt_39:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           88757 seqs, 32294092 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-081-522-4
33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 March 6, 2001, 09:42:41; Search time 8.47 Seconds (without alignments) 22.877 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GRGDFV 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TARP MONEX
UXA4_CHLTR
UF01_MOUSE
UF01_MOUSE
CIP1_MYTED
CIP2_MYTED
CIP2_MYTED
ACH1_ACHFU
PAP2_BOANA
TRM3_ECOLI
FLRE_HIRME
FMRE_MACN
IGRMM_HUMAN
LUXE_VIBFI
ESCI_HUMAN
LUXE_VIBFI
ESCI_HUMAN
FAR3_HIRME
FAR4_HIRME

TUFT_HUMAN
BIOB_SALTY
PRCT_PERAM
ACPH_RABIT
RM01_YEASI
OVM_LEPDE
UN06_CLOPA
DCMS_PSECH
                                                                                                                                                                                                                                                                      BIOA_SALTY
FARP_ARTTR
SUGA_ACHDO
UC22_MAIZE
LOK1_LOCMI
TRPI_PSEPU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    •
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P41966 moniezia ex
P38005 chlamydia t
P38639 mus musculu
P54714 canis famil
P13736 mytilus edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Description
                                                                                                                                                                                                                                                                                                                                                               6 pseudomonas
1 homo sapien
2 hirudo medi
3 hirudo medi
7 carcinus na
1 citrobacter
7 salmonella
3 artioposthi
1 acheta dome
                            B zea mays (m
locusta mig
d pseudomonas
home sapien
salmonella
periplaneta
d oryctolagus
saccharomyc
leptinotars
clostridium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7 mytilus edu
4 achatina fu
4 pardachirus
3 escherichia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               hirudo medi
macrocallis
homo sapien
vibrio fisc
```

}	RP RA	RECORDED TO THE RECORDED TO TH	Qy Db	S T W C C C C R R R R R R R R R R R R R R R	RNOCOS DE PARE	
Qu Ma		ښ مخ	Ma Ma		RESULT FARP_MO ID FAC DT 0: DT	
tc]	SE SECRESE		ery st tc)	SINK BELSKIN	120588300523 H	3335
Query Ma Best Loo Matches	SEQUENCE STRAIN-I Bini L., Comanâu Pallini Submitte -!- MISC -!- MISC PAOINON_TER SEQUENCE	LT 2 _CHITR UXA4_CHITR p38005; 01-OCT-1994 01-OCT-1994 30-NAY-2000 UNKNOWN PROTO BACHENYdia tr Bacteria; Ch	Query Ma Best Loc Matches	MEDLINE- MAULE A "GNFFFFA the shee Biochem. -!- SIMI Neurojep MOD_RES SEQUENCE	MONEX PARP P4195 01-NO 01-NO 01-NO CYCLO CYCLO	•
Match Local les	ENC ENC ENC ENC ENC ENC ENC	e my Correction	Match Local es 3 GDF 1:1	INCE 19: INE 1	OV-	
285	E HEROVO 12.	CHLTR 5; 15; 17-199 17-199 WN PR 17dia 17dia 17dia	ਸ –ਸ ਨਲ ਸ	ENCE. e A.G. FRFami FRFami Sheep hem. B SIMILA SIMILA FAMILY ODEPTI RES ENCE	119 NE	2444
in.	/43 San San (S (S LLA	R	imi	MEDIJINE-9331228 MEDIJINE-9331228 Maule A.G., Shav Maule A.G., Shav Maule A.G., Shav Mochem Biophy	95 	d.
Laı	4/BU tucc tucc 1., C NEOU NEOU IS: 5	Lacil (Re	Cor	2289 Shaw Shaw Pewo phys TY: TY: Am	ea K (Re	
imilarity ; Conservat	SEQUENCE. STRAIN-12/434/BU; Bini L. Santucci A. Comanducci M., Chris Pallini V.; Submitted (SEP-1994) -!- MISCELLANBOUS: O PROTEIN IS: 4.5, NON_TER SEQUENCE 5 AA: 47	ULT 2 4_CHIR UXA4_CHIR STANDARD; p38005; 01-OCT-1994 (Rel. 30, Cre 01-OCT-1994 (Rel. 30, Las 30-MAY-2000 (Rel. 39, Las UNKNOWN PROTEIN FROM 2D-1 Chlamydia trachomatis. Bacteria; Chlamydiales;	imilarity ; Conservat 5	E3. 493312289; PubMed G., Shaw C., Hal mnide: a novel 7M pp tapeworm, Moni Biophys. Res. C ILLARITY: BELCNGS ILLY ptide; Amidation. 6 6 6 6 6 6 6 7 8 7 87 87	A ST.	. 000н
y	7; 2hrist 2hrist 1994) 7S: ON 4.5,	STANDARD; 1. 30, Cr 1. 30, La 1. 30, La 2. STANDARD;	rva	9; Publy C., I novel orm, Mc s. Res BELON midation 787	325 325 326 326 327 327 327 327 327	
ت ی	Stian	ARD; Cr , Cr , La , La , La , La	الله ق	MO NG 10	ARU PE	თათა
36.4 100. ive	Magi ianen to the THE ITS M	(D; Created) Last seq Last ann 2D-PAGE F	39.4 66.7 ive	MW;	op ty	
0 00	7 × 10 0 m	ate t a AGI	do do	832 On Fam Zia Minu O T	ate t s t s hel	<u>سر سر سر</u>
0 0	SWISS SWISS J-GEL IS: 7	PRT; eated) st sequence up st snotation page FROM ELEM Chlamydiaceae;	1; 1;	PubMed**8323531; ., Halton D.W., vel *#MFFamide**1, , Monleyia expa Res. Commun. 19 LCNGS TO THE FA ation. 6 AMID 6 787 MW; 69D409	MONEX MONEX FARP_MONEX TANDARD; PRT; P4196; 01-NOV-1995 (Rel. 32, Created) 01-NOV-1997 (Rel. 32, Last sequence) 01-NOV-1997 (Rel. 32, Last annotatio) 01-NOV-1997 (Rel. 35, Last annotatio) FMRFAMIDE-LIKE NEUROPEFTIDE GNFFRF A Moniezia expansa (Sheep tapeworm). Eukaryota; Metazoa; Platyhelminthes; Cyclophyllidea; Anoplocephalidae; Mo	VP19_HSV1K THYL_PIG BIOB_CITFR TMOF_SARBU ALIGNMEN
Pred Mi	Ma Bi SS: 2 SAAA	PRT; quenc otat ROM	red	31; e-1; xpa 19 409	PRT uen ota FFR nth	AT 05.74
de.	darzoc lirkel S-PRC THE 28 KI	Ce El trice	isi	mmu nsa nsa nsa nsa nsa nsa nsa nsa nsa nsa	ES:	VP19_HSV1K THYL_PIG BIOB_CITFR TMOF_SARBU ALIGNMEN
12; No mat	., Marzocchi ., Birkelund SWISS-PROT da -GEL THE DETI IS: 28 KDA.	up on LEM	No.	Thim muno; sa. "sa. "sa. "(F) (F) (F) (F) (F) (F) (F) (F) (F) (F)	on i	ME VME
당.	., Marzocchi B. ., Birkelund S. SWISS-PROT data -GEL THE DETERM IS: 28 KDA.	5 dat upd ENT	Score 13; DB Pred. No. 8.9s 1; Mismatches	J. J	6 AA e update) ion updat 'AMIDE. 'S; Neoder Moniezia.	9_HSV1K L_PIG B_CITFR F_SARBU ALIGNMENTS
Ses B. 90		PRT; 5 AA. eated) st sequence update) st snotation update) page FROM ELEMENTARY BOT Chlamydiaceae; Chlamydia	DB 1 3.9e+1 1es	Med*8323531; Halton D.W., Thim L.; TMRPAmide-immunoreactive coniceia expansa."; . Commun. 193:1054-1060(1 GS TO THE FARP (FMRFAMIDE on. amidation. bMW; 69D409C9C4481000 CR	MONEX MONEX FARP_MONEX TANDARD; PRT; 6 AA. P41966; 01-NOV-1995 (Rel. 32, Created) 01-NOV-1995 (Rel. 32, Lest sequence update) 01-NOV-1997 (Rel. 32, Lest annotation update) 101-NOV-1997 (Rel. 35, Lest annotation update) FMRFAMIDE-LIKE NEUROPESTIDE GNFFRF-AMIDE. Moniezia expansa (Sheep tapeworm). Eukaryota; Metazoa; Platyhelminthes; Neodermata; Cyclophyllidea; Anoplocephalidae; Moniezia.	v.
1; 9e+04	, San , Vtr bank	nyd.	4	ive	nat	
0; 0;	, Sanchez, , Vtretou bank. INED PI OI	BODY	0; L	0 0	ρ.	
Length; ; Ind	to the		Length ; Ind	peptide 93). RELATED	C e	
Φ.	OF E	FR⊅	Φ.	ren	sto	
5;	E., Ratti F., Ratti	(FRAGMENT)	6; 1s		Cestoda;	P123
	pil Ra	ENT		isolat PEPTID		P23210 P01151 P12997 P41495
0;	lo tti UNK	·	0;	isolate PEPTIDE	n ce	
	ν ο κ			~ a	Euces toda;	herpes simp sus scrofa citrobacter sarcophaga
Gaps	N.		Gaps	from	ഠർമ	doc doc sed
ú			Ø	э	**	si rof act hag
						imp ter ga
0,			0.			

밁

ω

g

```
RESULT 3
UF01_MOUSE
밁
                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                   SHCCRRRRRRRRCCS DIFFE
                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                             ACETONE PHOSPHATE.
-!- PATHWAY: PLAYS AN IMPORT
-!- SUBUNIT: HOMODIMER (BY S
-!- SIMILARITY: BELONGS TO I
HSC-DDPAGE, P54714; DOG.
                                                                                                                                                                                                                                                                                                                                                                                                                  NON_TER
SEQUENCE
                                                                                                                                                TISSUE-HEART;
MEDLINE-98163340; PubMed-9504812;
                                                                                                                                                                                                                                              01-OCT-1996
01-OCT-1996
15-JUL-1998
                                                                                                                                                                                                                                                                                           CANFA
                                                                                                                                                                                                                                                                                                                                                                                                                                                      using preparative two-dimensional Electrophoresis 15:735-745(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                UF01_MOUSE P38639;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-OCT-1994 (Rel. 30, Last sequence update)
01-FEB-1995 (Rel. 31, Last annotation update)
UNKNOWN PROTEIN FROM 2D-PAGE OF FIBROBLASTS (Mus musculus (Mouse).
                                              INTERPRO; IPRO00652; PROSITE; PS00171; TIME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE-FIBROBLAST; MEDLINE-95009907;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa;
SEQUENCE
        NON_TER
                  NON_TER
                            Pentose
                                   Isomerase;
                                                                                                             Electrophoresis 18:2795-2802(1997).
                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                         Eukaryota;
                                                                                                                                                                                                                   Canis familiaris (Dog).
                                                                                                                                                                                                                                      TRIOSEPHOSPHATE
                                                                                                                                                                                                                                                                         P54714;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Merrick B.A., Patterson R.M., Wichter L.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mammalia; Eutheria;
                                                                                                                                     HSC-2DPAGE and the two-dimensional
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -OCT-1994
                                                                                                                                                                                                                                                                                                                                                  1 GR 2
                                                                                                                                                                                                                                                                                                                                                                                                                                   MISCELLANEOUS: 01
PROTEIN IS: 6.6,
                                                                                                                               heart proteins.
                                                                                                                                                                                                                                                                                  CANFA
                                                                                                                                                                                                                                                                                                                               g -
                                                                                                                                                                                                                                                                                                                                                                    Similarity 2; Conserv
                           shunt.
                                                                                                                                                                                                ; Metazoa; Chordata; Craniata; Vertebrata; Eutheria; Carnivora; Fissipedia; Canidae;
                                                                                                                                                                                                                                                                                                                                                                                                                   Ģ
                                    Glycolysis;
                                                                                                                                                                                                                                              (Rel.
(Rel.
(Rel.
                                                                                                                                                                                                                                                                                                                                                                    33.3
ilarity 100.
Conservative
                                                                       PLAYS AN IMPORTANT ROLE IN HOMODIMER (BY SIMILARITY).
TY: BELONGS TO THE TRIOSEPH
                                                                                                                                                                                                                                                                                                                                                                                                                   AA;
₽,
                                                                                                                                                                                                                                                                                   STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                              TIM;
                                                                                                                                                                                                                                              34,
                                                                                                                                                                                                                                                                                                                                                                                                                   717
                                                                                                                                                                                                                                                                                                                                                                                                                                                               two-dimensional gel electrophoresis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PubMed=7523108;
550
                                                                                                                                                                                                                                                                                                                                                                                                                                              ON THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chordata; Craniata; Vertebrata; i
Rodentia; Sciurognathi; Muridae;
                                                                                                                                                                                                                                              Last sequence Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                    ITS MW IS: 19
                                                                                                                                                                                                                                                                                                                                                                                                                   ₩;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Created)
M.
                                    Gluconeogenesis;
                                              PARTIAL.
                                                                                                                                                                                                                                                                                                                                                                               .
08;
                                                                                                                                                                                                                                   t sequence upd
t annotation u
(EC 5.3.1.1)
                                                                                                                                                                                                                                                                                                                                                                                                                                             2D-GEL THE DETERMINED PI
                                                                                                                                                                                                                                                                                                                                                                                                                   7364087043100000 CRC64;
64444862C9A00000 CRC64;
                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                              Score 11;
Pred. No.
                                                                                                                                                                                                                                                                                   PRT;
                                                                          TRIOSEPHOSPHATE
                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                    O
                                                                                                                                                                                                                                                                                                                                                                                                                                     KDA.
                                                                                                                                                    .
H.;
                                                                                                                                         gel
                                                                                                                                                                                                                                                      update)
                                                                                                                                                                                                                                    update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           տ
                                                                                                                                                                                                                                                                                   G
                                                                                                                                                                                                                                                                                                                                                                              DB 1; Le
8.9e+04;
                                                                                                                                         electrophoresis
                                    Fatty
                                                                                            SEVERAL
                                                                                                               3-PHOSPHATE =
                                                                                                                                                                                                                                                                                  A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ā
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         novel murine pro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (P19)
                                                                                                                                                                                                                                      (FRAGMENT).
                                    acid biosynthesis;
                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                         ISOMERASE
                                                                                            METABOLIC PATHWAYS
                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                               엹
                                                                                                                                                                                                 Euteleostomi;
Canis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Euteleostomi;
; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                               THIS
                                                                                                               DIHYDROXY-
                                                                                                                                          database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         proteins
                                                                          FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    J.К.;
                                                                                                                                                                                                                                                                                                                                                                                                                                               UNKNOWN
                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                     Saps
                                                                                                                                           Of.
                                                                                                                                                                                                                                                                                                                                                                     0
```

Query Match

30.3%;

Score

10;

BB

ŗ

Length

```
20
                                     吊
                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1_MYTED
CIP1_MYTED
P13736;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-JAN-1990 (Rel. 13, Created)
01-JAN-1990 (Rel. 13, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
CONTRACTION-INHIBITING PEPTIDE I (MIP I)
Mytilus edulis (Blue mussel).
Mytilus edulis (Blue mussel).
Eukaryota; Metazoa; Mollusca; Bivalvia; Pteriomorphia; Mytiloida;
                                                                                                                                                                                                                                                                 MYTED
                                                                                                                                                                                                                                                                                                                                                                                                    MOD_RES
                                              MOD_RES
                                                                                                                                                                                                                                            CIP2_MYTED P13737;
                                                                                                                                                                                                      Ol-JAN-1990 (Rel. 13, Created)
Ol-JAN-1990 (Rel. 13, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
CONTRACTION-INHIBITING PEPTIDE II (MIP II).
                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                      SEQUENCE
                                                                                            Biochem. Biophys. Res. Commun. 1
                                                                                                                       TISSUE-PEDAL GANGLION;
MEDLINE-88240357; PubMed-3377776;
Hirata T., Kubota I., Iwasawa II.
                                                                                                                                                                           Mytiloidea;
                                                                                                                                                                                  Mytilus edulis (Blue mussel).
Eukaryota; Metazoa; Mollusca; Bivalvia; Pteriomorphia; Mytiloida;
                                                                                                                                                                                                                                                                                                                                                                                                                       PIR; A27696;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hirata
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE-88240357;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mytiloidea;
                                                                   PIR; B27696;
                                                                              -
                                                                                     "Structures and actions of Mytilus inhibitory peptides. 
Nochem. Biophys. Res. Commun. 152:1376-1382(1988). 
I- FUNCTION: INHIBITORY ACTION ON CONTRACTIONS IN SEVE MUSCLES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hirata T., Kubota I., Iwasawa N., 1
Structures and actions of Mytilus
                                                                                                                                                        EQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ISSUE-PEDAL
                                                                                                                                                                                                                                                                                                                       5 FV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Çī
                                                                                                                                                                                                                                                                                                      ຜ
                                                                  SIMILARITY: TO M
; B27696; B27696.
                                                                                                                                                                                                                                                                                                                                                                                                                                 SIMILARITY: TO MIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                   FUNCTION: INHIBITORY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             F۷
                                                                                                                                                                                                                                                                                                      7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            된_
                                                                                                                                                                                                                                                                                                                                          l Similarity
2; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
2; Conser
                                                                                                                                                                                                                                                                                                                        σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N
                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Biophys.
                                                                                                                                                                                                                                                                                                                                                                                                              Amidation.
                                                         Amidation.
                                                                                                                                                                                                                                                                                                                                                                                          വ
                                     σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mytilidae; Mytilus.
                                                                                                                                                                          Mytilidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                          AA;
                                     ΑA;
                                                                                                                                                                                                                                                                                                                                                                                                                        A27696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GANGLION;
                                                                                                                                                                                                                                                       STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PubMed=3377776;
I., Iwasawa N..
                                                                                                                                                                                                                                                                                                                                                                                            637
                                     621
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Res.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; ٢1
                                                                                                                                                                                                                                                                                                                                                   30.3%;
                                                                                                                                                                                                                                                                                                                                                                                                      σ
 30.3%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                          MW;
                                      WW;
                                                                            Н
                                                                                                                                                                          Mytilus
                                                                                                                                                                                                                                                                                                                                                                                                                                  HI.
                                                                                                                                                                                                                                                                                                                                        J.08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACTION
                                                                                                                                                                                                                                                                                                                                                                                          AMIDATION.
72C9C68775B81000 CRC64;
                                     AMIDATION:
72C9C6876DD81000 CRC64;
                                                                                                                                                                                                                                                                                                                                           score 10; DB; Pred. No. 8.9
 Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              N., Takabatake I., Ikeda T., tilus inhibitory peptides."; 152:1376-1382(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No.
                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
 . 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    CONTRACTIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             σ
                                                                                                                                                                                                                                                       σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8.9e+04;
hes 0;
                                                                                                                                                                                                                                                                                                                                                    DB 1;
8.9e+
  B. 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A
                                                                                                                                                                                                                                                       AA
  )B 1; L
1.9e+04;
                                                                                                                                                                                                                                                                                                                                                      .9e+04;
          Length
                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                IN SEVERAL MOLLUSCAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                     IN SEVERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                               6,
                                                                                                                   . . H
                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLLUSCAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Muneoka
                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                            ۲.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ۲.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                             0;
```

**

etis 1

```
RESULT
PAP2_PA
ID PA
AC PA
DT 31
DT 31
DT 0
                                                                                                                                                                                                                   맔
                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                        Matches
30-MAY-2000
30-MAY-2000
01-OCT-2000
PARDAXIN II
                                                                                                                                                                                                                                                                                                                                                                                                                MOD_RES
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN-FERUSSAC: TISSUE-GANGLION;
MEDLINE-89273551; PubMed-2597281;
Kamatani Y., Minakata H., Kenny P.T.M., Iwashita T., Watanabe.
Funase K., Sun X.P., Yongsiri A., Kim K.H., Novales-Li P.,
Novales E.T., Kanapi C.G., Takeuchi H., Nomoto K.;
"Achatin-I, an endogenous neuroexcitatory tetrapeptide from Ac
fulica Ferussac containing a D-amino acid residue.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACHFU
                                                                                                                                  _PARMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Fujimoto K., Kubota I., Yasuda Kamatani Y., Minakata H., Nomoto K., Yoshida M., Harada A., Muneoka Y., Kobayashi M.; "Purification of achatin-I from the atria of the African giant snail, Achatina fulica, and its possible function."; Biochem. Biophys. Res. Commun. 177:847-853(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACH1_AC
P35904;
                                                                                       PAP2_PARMA
P81864;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN=FERUSSAC; TISSUE=HEART ATRIUM; MEDLINE=91264856; PubMed=1675568;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Achatina fulica (Giant African snail).
Eukaryota: Metazoa: Mollusca: Gastropoda: Pulmonata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (H-Gly-D-Phe-Ala-Asp-OH),
D-amino acid residue.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CHARACTERIZATION.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Biochem. Biophys. Res. Commun. 160:1015-1020(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Mollu:
Achatinacea; Achatinidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-JUN-1994
01-JUN-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hormone; D-amino acid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Crystal structure and molecular conformation of achatin-I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ishida T., In Y., Doi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=93014529; PubMed=1399265;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             X-RAY CRYSTALLOGRAPHY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -JUL-1998
                                                                                                                                                                                                                   μ.
                                                                                                                                                                                                                                                              1 GRGD 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      nino acid residue.";
J. Pept. Protein Res. 39:258-264(1992).
FUNCTION: NEUROEXCITATORY PEPTIDE; INCREASES THE IMPULSE FREQUENCY FUNCTION: NEUROEXCITATORY FORTHE OF THE IDENTIFIED HEART EXCITATORY AND PRODUCES A SPIKE BROADENING OF THE AMPLITUDE AND FREQUENCY OF THE NEURON (PON); ALSO ENHANCES THE AMPLITUDE AND FREQUENCY OF THE NEURON (PON); ALSO AN EFFECT ON SEVERAL OTHER! MUSCLES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          u
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                   GFAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACHEU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7
                                                                                                                                                                                                                                                                                                    Similarity
2; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ٨
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CHARACTERIZATION, AND SYNTHESIS
                                                                                                                                                                                                                                                                                                                                                                                                                  4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (Rel.
(Rel.
(Rel.
                 (Rel. 39, Created)
(Rel. 39, Last sequence u)
(Rel. 40, Last annotation
                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
  (PXII)
                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD
                                                                                                                                                                                                                                                                                                                                                                                                                408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         36,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29, Created)
    (FRAGMENT).
                                                                                                                                                                                                                                                                                                                               27
50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3
                                                                                                                                                                                                                                                                                                                                                                                                                  ¥.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Last
                                                                                                                                                                                                                                                                                                                        .38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Achatina.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Inoue
                                                                                                                                                                                                                                                                                                                                                                                                              D-PHENYLALANINE.
6AADD9C810000000 CRC64;
                                                                                                                                                                                                                                                                                                    Score 9; DB 1
Pred. No. 8.9e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 endogenous
                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  :
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                        update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Yasuda-Kamatani Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 neuropeptide
                                                                                                                                                                                                                                                                                                                             в 1;
.9e+04
                                                                                                           $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                        2
                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                               4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 containing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Stylommatophora;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Minakata
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Achatina
                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7
                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ξ
                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ö
                      SECOND DESCRIPTION OF THE PROPERTY OF THE PROP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SO THE COCCOCCE PRINT REPORT OF THE PRINT OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-JAN-1990
01-JAN-1990
15-DEC-1998
                                                                                                                                                                    use by non-profit institutions as long modified and this statement is not removed entities requires a license agreement (See
                                                                                                                                                                                                                                                                                                                                                                                     Inamoto S., Yoshioka Y., Ohtsubo E., "Identification and characterization and tray genes of plasmid R100."
J. Bacteriol. 170:2749-2757(1988).
-i- FUNCTION: TRANSFER GENE PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TRM3_SC
P13973;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ECOLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NON_TER
SEQUENCE
                                                                                                                                  or send an email to license@isb-sib.ch)
                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the El
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   J. Biol. Chem. -i- FUNCTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Actinopterygii; Neopterygii; Teleostei; Eute. Acanthomorpha; Acanthopterygii; Percomorpha; Soleoidei; Soleidae; Pardachirus.
                      SEQUENCE
                                                              PIR; A32014;
Conjugation;
                                                                                                                                                                                                                                     the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Plasmid IncFII R100.
Bacteria; Proteobact
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TRAM PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Toxin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE.
TISSUE-SKIN
                                                                                                         EMBL; M20941; -;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=88227859; PubMed=2836369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Escherichia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Escherichia coli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         polypeptides fi
marmoratus).";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDIINE-87057369; PubMed-3782138;
Lazarovici p., Primor N., Loew L.M.;
"Purification and pore-forming activity
polypeptides from the secretion of the F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pardachirus marmoratus (Red
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3 GDF 5
                                                                                                                                                                                                                                                                                                                          SUBCELLULAR LOCATION: CYTOPLASMIC. SIMILARITY: TO TRAM PROTEIN OF OTHER PLASMIDS.
                                                                                                                                                                                                                                   ween the Swiss Institute of Bioinf
European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SUBCELLULAR LOCATION: SECRETED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIMILARITY: BELONGS TO THE
                                                                                                                                                                                                                                                                                                                                                                   PROCESS OF BACTERIAL CELLS FOR THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FUNCTION: EXHIBITS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROPERTIES. FORMS VOLTAGE-DEPENDENT, ION-PI IN MEMBRANES. AT HIGH CONCENTRATION CAUSES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     _ECOLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity 66. 2; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Proteobacteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Metazoa; Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (Rel. 13, Created)
(Rel. 13, Last sequence up)
(Rel. 37, Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SECRETION;
                                                              A32014.
Plasmid; DNA-binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   261:16704-16713(1986).
EXHIBITS UNUSUAL SHARK REPELLENT AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STANDARD;
                                                                                                         NOT_ANNOTATED_CDS
                        634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                υı
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MW;
                        ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gamma subdivision;
                      6B1B1AA443500000 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7769C9C9C8100000 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sea moses sole)
a; Craniata; Ver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PARDAXIN FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PENDENT, ION-PERMEABLE CHANNELS TRATION CAUSES CELL MEMBRANE LY SOLUTION EXISTS AS A TETRAMER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       у
О.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      update)
                                                                                                                                                                                                                                                                                                                                                                                         SI
                                                                                                                                                                                                                                                                                                                                                                                                                                                        of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                update)
                                                                                                                                                                                                                                                                                                                                                                   S INVOLVED
EXCHANGE C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 y of
Red
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 1;
                                                                                                                                                                                                                                There are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Euteleostei; Neoteleostrpha; Pleuronectiformes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      the products
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9e+04
                                                                                                                                                                                                                 as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    two
                                                                                                                                                                                        Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Enterobacteriaceae;
                                                                                                                                                                                                                 its content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 hydrophobic moses sole
                                                                                                                                                                                                                                                                                                                                                            OF
                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                     PLASMID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SURFACTANT
                                                                                                                                                                                          уď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                        from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Neoteleostei;
                                                                                                                                                                                                                                   restrictions
                                                                                                                                                                                          and
                                                                                                                                                                                                                                                                                                                                                                                         CONJUGATION
                                                                                                                                                                                                                                                           EMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                           the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (Pardachirus
                                                                                                                                                                                                                                                                                മ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                              collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LYSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                        traJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                     8
```

```
RESULT 11
FMRF_MACNI
                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT
                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          _HIRME
                                                                                                     21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
15-JUL-1998 (Rel. 36, Last annotation update)
15-JUL-1998 (Rel. 36, Last annotation update)
15-JUL-1998 (Rel. 36, Last annotation update)
15-MIRETAMIDE (PEAK C) (CARDIOEXCITATORY NEUROPEPTIDE).
MACCOCALLISTA Nimbosa (Sun-ray clam), Nerels virens (Sandworm),
Hirudo medicinalis (Medicinal leech), and Helisoma trivolvis (Snail).
Eukaryota; Metazoa; Mollusca; Bivalvia; Heteroconchia; Veneroida;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDIJNE-92195954; PubMed-1686933;
Evans B.D., Pohl J., Kartsonis M.A., Calabrese
"Identification of RFamide neuropeptides in the
Peptides 12:897-908(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FIRFAMIDE.

Hirudo medicinalis (Medicinal leech), and Helisoma trivolvis (Snail).

Eukaryota; Metazoa; Annelida; Clitellata; Hirudinida; Hirudinea;

Arynchobdellida; Hirudiniformes; Hirudinidae; Hirudo.
                     Price D.A., Greenberg M.J.; "Structure of a molluscan cardioexcitatory Science 197:670-671(1977).
                                                              SPECIES-M.NIMBOSA;
                                                                                                                                                                                                                                                                                                                                                       Neuropeptide;
MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                          SPECIES-H.TRIVOLVIS; TISSUE-KIDNEY; MEDLINE-94286417; PubMed-7912428;
                                                 MEDLINE-77215956; PubMed-877582;
                                                                         SEQUENCE, AND SYNTHESIS
                                                                                                                                                                                  FMRF_MACNI P01162;
                                                                                                                                                                                                                                                                                                                                                                                                                     Madrid K.P., Price D.A., Gre
"FMRFamide-related peptides
                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-NOV-1995
01-NOV-1995
                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SPECIES-H.MEDICINALIS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P42561;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FLRF_HIRME
SEQUENCE,
                                                                                               Veneroidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -NOV-1995
                                                                                                                                                                                                                                                  Н
                                                                                                                                                                                                                                                                     v
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ۳
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ν
                                                                                                                                                                                                                                                                                                                                                                                        SIMILARITY: BELONGS
                                                                                                                                                                                                                                                                                                                                                                             FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KND --
                                                                                                                                                                                                                                                  골..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RGD
                                                                                                                                                                                                                                                                   ΨV
                                                                                                                                                                                                                                                                                         Similarity
1; Conserv
                                                                                                                                                                                                                                                                   σ
                                                                                                                                                                                                                                                  N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4
                                                                                                                                                                                                                                                                                                                                                                                                   15:31-36(1994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ω
AND
                                                                                                                                                                                                                                                                                                                                              4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (Rel.
(Rel.
(Rel.
                                                                                              Veneridae; Macrocallista.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                              AA;
CHARACTERIZATION
                                                                                                                                                                                                                                                                                                                                                                  Amidation.
                                                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     32,
                                                                                                                                                                                                                                                                                                                                              582 MW;
                                                              TISSUE-CEREBRAL
                                                                                                                                                                                                                                                                                                    21.2%;
50.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Last
Last
                                                                                                                                                                                                                                                                                                                                                                                      TO THE FARP (FMRFAMIDE
                                                                                                                                                                                                                                                                                                                                                                                                                      Greenberg M.
des from the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sequence update) annotation updat
                                                                                                                                                                                                                                                                                                                                             AMIDATION.
69D40729A0000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 8;
Pred. No.
                                                                                                                                                                                                                                                                                                    Score 7;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                          Mismatches
                                                              PEDAL,
                                                                                                                                                                                                                                                                                                                                                                                                                     I.J., Kha
kidney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 1; Le 8.9e+04;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      update)
                                                                                                                                                                                                                                                                                                    DB 1; I
8.9e+04;
                                                                                                                                                                                                                                                                                                                                                                                                                      Khan P
ney of
                                                                                                                                                                                             ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               $
                                                                AND
                                                                                                                                                                                                                                                                                                                                              CRC64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ese R.L.;
the medicinal leech.";
                                                                                                                                                                                                                                                                                                                                                                                                                                 Œ
                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                 f.R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                               VISCERAL GANGLION
                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                        RELATED
                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                 Saleuddin A.S.M.;
                                                                                                                                                                                                                                                                                                               4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ű
                                                                                                                                                                                                                                                                                                                                                                                        PEPTIDE)
                                                                                                                                                                                                                                                                                                                                                                                                                        Helisoma
                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

ŧ

Query Match

18

Score

6;

DB

۲,

Length

```
RESULT 12
GRAWALEUMAN STANDARD; PRT; 3 AA.
ID GRAWALEUMAN STANDARD; PRT; 3 AA.
AC P01157;
DT 21-TUL-1986 (Rel. 01, Created)
DT 21-TUL-1986 (Rel. 01, Last sequence update)
DT 21-TUL-1986 (Rel. 01, Last annotation update)
DE GROWIH-MODULATING PEPTIDE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Б.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOR CCC PRESENCE OF THE PROPERTY OF THE PROPER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query
Best I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Neuropeptide; ; MOD_RES , SEQUENCE 4 A
PIR; A014
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SPECIES-H.MEDICINALIS;
MEDLINE-92195954; PubMed-1686933;
Evans B.D., Pohl J., Kartsonis M.A., Calabrese R.L.;
"Identification of RFamide neuropeptides in the medi
Peptides 12:897-908(1991).
[5]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SPECIES-N.VIRENS;
MEDLINE-90259866; PubMed-2342992;
Krajniak K.G., Price D.A.;
"Authentic FMFFamide is present in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Price D.A., Greenberg M.J.;
"purification and characterization of a cardioexcitatory neuropeptide
from the central ganglia of a bivalve mollusc.";
Prep. Biochem. 7:261-281(1977).
                                                                 Schlesinger D.H., Pickart L., Thaler M.M.;
"Growth-modulating serum tripeptide is glycyl-histidyl-lysine.";
Experientla 33:324-325(1977).
-!- MISCELLANEOUS: THIS SERUM TRIPEPTIDE HAS BEEN FOUND TO STIMU
                                                                                                                                                                                                                                    Homo sapiens (Human)
Eukaryota; Metazoa; (
Mammalia; Eutheria; !
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SPECIES-H.TRIVOLVIS; TISSUE-KIDNEY;
MEDILINE-94286417; PLUMEd-7912428;
Madrid K.P. Price D.A., Greenberg M.J., Khan H.R.,
"FMRFammide-related peptides from the kidney of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Peptides 15:31-36(1994)...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SPECIES=M.NIMBOSA; FISSUE=GANGLION; MEDLINE=78012038; PubMed=909875;
                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                MEDLINE=77162369;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Peptices 11:75-77(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5 EV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIMILARITY: FAMILY.
                                      MISCELLANEOUS: THIS SERUM
GROWTH OF SOME CELL TYPES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FUNCTION: MYOACTIVE; CARDIOEXCITATORY SUBSTANCE. ACTIVITIES INCLUDE AUGMENTATION, INDUCTION, AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CARDIAC CONTRACTION SIMILARITY: BELONGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A01426; ECNK.
A60418; A60418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
1; Conser
GKHU.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Amidation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4
600 MW;
                                                                                                                                                                PubMed=858356;
  340 MW;
                                                                                                                                                                                                                                    Chordata; primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21
50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               THE FARP
  6331E81000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AMEDATION.
69D40699A0000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 7; DB 1
Pred. No. 8.9e
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ļ.
                                                                                                                                                                                                                                    Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                              TRIPEPTIDE
AND TO INHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (FMRFAMIDE RELATED PEPTIDE)
                                              TIDE HAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   polychaete Nereis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9e+04
    CRC64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CRC64;
                                                OTHER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          medicinal leech.";
                                                FOUND TO STIMULATE R TYPES IN VITRO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       snail, Helisoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REGULARIZATION OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

100.0%;

•

The same of the same

```
6FFFF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                          RESULT
DCML_PS
                                                                                                                                                                                                                                     Š
RRRR COSE DIT AC
                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 13
LUXE_VIBFI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity Matches 1; Conserv
                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-MAR-1992
01-MAR-1992
01-OCT-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SWARTZMAN E., KAPOOR S., Graham A.F., Meighen E.A.*,

"A new Vibrio fischeri lux gene precedes a bidirectional termination
site for the lux operon.";

J. Bacteriol. 172:6797-6802(1990).

-i-- FUNCTION: ACYL-PROTEIN SYNTHETASE ACTIVATES TETRADECANOIC ACID.

-i-- FUNCTION: ACYL-PROTEIN SYNTHETASE ACTIVATES TETRADECANOIC ACID.

-i-- CONVERTING TETRADECANOIC ACID TO THE ALDEHYDE WHICH SERVES AS
SUBSTRATE IN THE LUCIFERASE CATALYZED REACTION.

-i-- CATALYTIC ACTIVITY: ATP + AN ACID + PROTEIN - AMP + PYROPHOSPHATE

+ AN ACYL-PROTEIN THIOLESTER.

-i-- PROTEIN STEP IN THE BIOLUMINESCENT FATTY ACID REDUCTASE
                                                                                                                               DCML_PSECH p19916;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LUXE_VIBFI P24272;
                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced throubetween the Swiss Institute of Bioinformatics and the the European Bioinformatics Institute. There are go reuse by non-profit institutions as long as its conten
                                                                          01-FEB-1991 (Rel. 17, Created)
01-FEB-1991 (Rel. 17, Last sequence update)
01-DEC-1992 (Rel. 24, Last annotation update)
CARBON MONOXIDE DEHYDROGENASE LARGE CHAIN (EC
                                                                                                                                                                                                                                                                                                                                 NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                        modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A. MEDLINE-91072226; PubMed-2254256;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Vibrio fischeri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ol-MAR-1992 (Rel. 21, Created)
Ol-MAR-1992 (Rel. 21, Last sequence update)
Ol-CCT-1996 (Rel. 34, Last annotation update)
LONG-CHAIN-FATTY-ACID--LUCIFERIN-COMPONENT LIGASE
                                                                                                                                                            PSECH
                                                                                                                                                                                                                                                                                                                                                                                                  or send
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bacteria;
MEDLINE-90055678; PubMed-2818128; Kraut M., Hugendieck I., Herwig S.,
                                                    Bacteria; Proteobacteria
                                                                                                                                                                                                                                                                                                                                                                         EMBL; M62812; -; NOT_ANNOTATED_CDS.
                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                           Luminescence; Ligase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (ACYL-PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 G 1
1 G 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             _
                                                                                                                                                                                                                                       4 D 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPLEX
                                                                                                                                                                                                              O
                                                                                                                                                                                                                                                                                                                                                                                                  an email
                                                                                                                                                                                                                                                                                                                                                                                                requires a license agreement (See http://www.isb-sib.ch/announce/an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Proteobacteria;
                                                                                                                                                                                                                                                                                                                                  3 AA;
                                                                 carboxydohydrogena
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SYNTHETASE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STANDARD;
                                                                                                                                              STANDARD;
                                                                                                                                                                                                                                                                                                                                   374 MW;
                                                                                                                                                                                                                                                                               18.2%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gamma subdivision; Vibrionaceae; Vibrio.
                                                                                                                                                                                                                                                                                                                                 6AA3303000000000 CRC64; •
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                             Score 6;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No. 8.9e+04; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                It is produced through a collaboration
 Meyer
                                                                                                                                                                                                                                                                               DB 1; L
. 8.9e+04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ω
                                                                                                                                              4
                                                                                                                                                                                                                                                                                                                                                                                                                                       There are so restrictions ing as its content is in
                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  æ
                                                                             (EC
 0
                                                                                                                                                                                                                                                                                                                                                                                                                             Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        E A
                                                                                                                                                                                                                                                                                          Length 3;
                                                                             1.2.99.2)
                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  )
된
                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                             γď
                                                     •
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6.2.1.19)
                                                                                                                                                                                                                                                                                                                                                                                                                               and
                                                                              (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                               for
                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                               n no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                  0
```

Search completed: March Job time: 108 sec

Ó

2001,

09:44:29

0

```
RESULT
EOSI_HU
                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STARCCCCCRR
                  Ş
                                                                                        밁
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                       Matches
                                                   Best
                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                  EOSI_HUMAN
P02731;
                                                                                                                                                                                                                                                                                                                                                       HUMAN
                                                                                                                                                                                                                                                                                           21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence up
21-JUL-1986 (Rel. 01, Last annotation
EOSINOPHILOTACTIC PEPTIDES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -1- COFACTOR: MOLYBDENUM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Arch. Microbiol. 152:33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Homology and distribution of carboxydotrophic bacteria.";
                                                                                        SEQUENCE
                                                                                                           PIR; A03190;
VARIANT
                                                                                                                                                                                                   "Purification and synthesis of eosinophilotactic human lung tissue: identification as eosinophil c
                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Oxidoreductase;
NON_TER 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PIR;
                                                                                                                                                                                Proc.
                                                                                                                                                                                        anaphylaxis."
                                                                                                                                                                                                                      Goetzl E.J., Austen K.F.;
                                                                                                                                                                                                                                                                                  Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NON_TER
                                                                                                                                                                                                                                MEDLINE=76078412; PubMed=1060093;
 ν.
Ν
                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                             1 G 1
2 G 2
                  _
ဝ
                                                                                                                             C. Natl. Acad. Sci. U.S.A. 72:4123-4127(1975).

MISCELLANEOUS: THESE PEPTIDES ARE RELEASED FROM MAST CELLS
(AND OTHER (ISSUES) DURING HYPERSENSITIVITY REACTIONS
(ANAPHYLAXIS). THEIR ACTIVITIES, PREFERENTIALLY AFFECTING
EOSINOPHILS, INCLUDE CHEMOTAXIS, CHEMOTACTIC DEACTIVATION.
OF ENZYMES, AND STIMULATION OF THE HEXOSE MONOPHOSPHATE SI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SMALL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PL0140;
ന -
                    ш
 N
                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity 100
1; Conservative
                                                 Similarity
                                        ::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4 AA; 441 MW;
                                        Conservative
                                                                                       A
H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PL0140
                                                                                                                      ETHUL.
                                                                                                                                                                                                                                                                                                                                              STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Molybdenum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    152:335-341(1989).
                                                                                        390 MW;
                                                 18.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                               18.2%;
                                                                                                            -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        THREE
                                                                                       V -> A (IN OTHER PEPTIDE).
/FTId-VAR_005201.
5B05B862A0000000 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7761E876F0000000
                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 6; DB 1
Pred. No. 8.9
0; Mismatches
                                                 Score 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CO dehydrogenase structural
                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        POLYPEPTIDE CHAINS:
                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      +
                                                   ŏ
                                                                                                                                                                                                                                                                                                                 update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCEPTOR
                                                  .
ВВ
                                                                                                                                                                                                                                                                                                      update)
                                                                                                                                                                                                                                                                                                                                               4
                                                                                                                                                                                                                                                                                                                                              A
                                                  1; Le .9e+04;
                                                                                                                                                                                                                                                                                                                                                                                                                                               1; Le .9e+04;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CRC64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .
                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 4;
                                                           Length 4;
                                                                                                                                                                                                     chemotactic fa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CO(2) +
                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LARGE,
                                                                                                                                                                        CELLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   genes
                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                      factor
                                                                                                                                                                                                              of
                                                                                                                                                                        Ä
                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   in
                                                                                                                                                                       LUNG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AND
                                                                                                                                                                                                      of
```

THIS PAGE BLANK (USPTO)

THIS PAGE BLANK (USPTO)

Run

on:

OM protein

```
Total number of
                                                                                                                                                                                                                                                                                                                                                                                                                    No. is the number of results predicted by chance to have a greater than or equal to the score of the result being printed, derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein search, using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    length:
                                                                                                                                                                                                                                                                                                                              Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Minimum Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Maximum
Listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SPTREMBL_15:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-081-522-4
                                                                        115
115
115
115
115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              374700 seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      March
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GRGDFV 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sp_archea:*
sp_bacteria:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sp_phage:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sp_organelle: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sp_mhc:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sp_fungi:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sp_vertebrate:*
sp_unclassified:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sp_virus:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sp_rodent:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sp_plant:*
                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                _invertebrate:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      human: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Match
first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2001, 09:42:22; Search time 19.02 Seconds
(without alignments)
36.974 Million cell updates/sec
                                                                        GenCore version (c) 1993 - 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           n 0%
n 100%
t 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              117207915 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gapext 0.5
                                                                                                                                                               008720
                                                                                                                                                                                                                                                                                                                                  Ħ
                                                                                                                          P82181
P82182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sw model
                                                                                                                                                                                                                                                                                                                                                                                        SUMMARIES
               ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4.5
Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13
                                                               P82070 litoria rub
P82099 litoria rub
P82099 litoria rub
P82095 litoria rub
P82073 litoria rub
P82100 litoria rub
P82071 litoria rub
P82072 litoria rub
P82072 litoria rub
P82072 litoria rub
Q08720 homo sapien
P82181 spinacia ol
P82182 spinacia ol
P82541 spinacia ol
                                                                                                                                                                                                                                                                                                                              Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 (1)
A 2 (2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 윰
                                                                                                                                                               SO TENER REPORT OF THE PROPERTY OF THE PROPERT
                                                                   Query Match
Best Local S
Matches 2
                                                                                                                                                           Amphibian skin;
MOD_RES 5
SEQUENCE 5 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P82099;
P82099;
01-MAY-2000
01-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       P82070;
01-MAY-2000
01-MAY-2000
01-MAY-2000
                                                                                                                                                                                                                                      SEQUENCE:
TISSUE-SKIN SECRETION;
Wabnitz P.A., Bowie J.H., Tyler M.J., Wallace J.C.;
"Peptides from the skin glands of the Australian buzzing
"Peptides from the skin glands of the Skin peptides from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TISSUE-SKIN SECRETION;
Steinborner S.T., Wabbitz P.A., Waugh R.J., Bowie J.H., Gao
Tyler M.J., Wallace J.C.;
"The structure of new peptides from the Australin red tree
'Litoria rubella', the skin peptide profile as a probe for
of evolutionary trends of amphibians.";
Aust. J. Chem. 49:955-963(1996).

11- FUNCTION: CARRIDINS SHOW NEITHER NEUROPEPTIDE ACTIVITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Amphibian skin.
SEQUENCE 5 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Litoria rubella (Desert tree frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Neobatrachia; Bufonoidea; Hylidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ANTIBIOTIC ACTIVITY.
-!- TISSUE SPECIFICITY: SECRETED BY THE SKIN
-!- MASS SPECIROMETRY: MW-598; METHOD-FAB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 P82070
                                                                                                                                                                                                                                                                                                                                                                                                   Amphibia; Batrachia;
                                                                                                                                                                                                                                                                                                                                                                                                                        Litoria rubella (Desert tree frog).
Eukaryota; Metazoa; Chordata; Crani
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ELECTRIN 3
                                                                                                                                                                                                                     Aust.
                                                                                                                                                                                                                                  rubella."
                                                                                                                                                                                                                                                                                                                                  SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=104895;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=104895;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Litoria.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
tes 2; Conserv
                                ر
ت
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DF - 5
                 = =
7
                                                                                                                                                                                                                     J. Chem.
                                σ
                                                                   Similarity
2; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AND MASS SPECTROMETRY
                                                                                                                                                             5 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ) (TrEMBLrel. 13,
) (TrEMBLrel. 13,
) (TrEMBLrel. 13,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (Tramburel. (Tramburel. (Tramburel.
                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                   52:0-0(1999).
                                                                                                                                                                                                 Amidation.
                                                                                                                                                               630 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                598 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       36.4%;
                                                                                      30.3%;
                                                                                                                                                                                                                                                                                                                                                                                                       Anura; Neobatrachia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13,
                                                                                                                                                             AMIDATION.
668761F2C9A00000 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6DD9C9CAB2A00000 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Created)
Last sequence update)
Last annotation updat
                                                                   score 10; DB; Pred. No. 3.7; Pred. No. 3.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 12; DB; Pred. No. 3.7.
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Created)
Last sequence update)
Last annotation updat
                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                     Craniata; Vertebrata; Euteleostomi;
sobatrachia; Bufonoidea; Hylidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   տ
                                                                                      DB 13;
3.7e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 13; 1
3.7e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ⋛
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bowie J.H., Gao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DORSAL GLANDS
                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              n red tree frog probe for the study
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                     Indels
```

Result

Pred.

ż

RESULT

밁

tree frog Litoria

0

Gaps

0

13 13 13 13 13 13 13

Minimum Maximum

seq

NOR

C.,

0,

Gaps

0

Searched:

Scoring table: Sequence: Perfect score: Title:

Database

```
PRESULT
PRESUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRESULATE PRESUL
밁
                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                         Query Match
Best Local S
Matches 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-MAY-2000
01-MAY-2000
01-MAY-2000
ELECTRIN 1.
                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE:
TISSUE-SKIN SECRETION;
Wabnitz P.A., Bowie J.H., Tyler M.J.,
"Peptides from the skin glands of the
"Peptides from the skin glands of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Litoria rubella (Desert tree :
Eukaryota; Metazoa; Chordata;
Amphibia; Batrachia; Anura; N
                                                                                                                                                                                                                                              Amphibian
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOD_RES
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               P82096;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P82096
                                                                                                                                                                                                                                                                                         -!- FUNCTION: CAERIDINS SHOW ANTIBIOTIC ACTIVITY.
-!- TISSUE SPECIFICITY: SECRE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; (
Amphibia; Batrachia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-MAY-2000 (TREMBLIEL 13, 01-MAY-2000 (TREMBLIEL 13, 01-MAY-2000 (TREMBLIEL 13,
                                                                                                                                                                                                                                                                                                                                                                                 Aust. J. Chem. 52:0-0(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Wabnitz P.A., Bowie J.H., Tyler M.J., "Peptides from the skin glands of the Litori electrica. Comparison with the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE-SKIN SECRETION;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=104895;
                                                                                                                                                                                                                                                                                                                                                                                                                rubella."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=104895;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RUBELLIDIN 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Amphibian skin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             itoria rubella (Desert tree
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
N
                                                      ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4
                                                      GDF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     F۷
GFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                J. Chem. 52:0-0(1999).
                                                                                                      2; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     h 30.3%;
Similarity 100.0%;
2; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     σ
4
                                                   ហ
                                                                                                                                                                                                                                              skin.
5 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            O (TrEMBLrel. 13, 0
O (TrEMBLrel. 13, 1
O (TrEMBLrel. 13, 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Amidation.
                                                                                                                                                                                                                                                 570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 792 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chordata;
; Anura; Ne
                                                                                                                                  27.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             σ
                                                                                                                                                                                                                                                 WW;
                                                                                                                                                                                                                                                                                                    SECRETED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AMIDATION.
6683704772C9A000
                                                                                                                                                                                                                                                 71A9C9C862A00000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Created)
Last sequence
Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   e frog).
a; Craniata; Vertebrata; Eu
Neobatrachia; Bufonoidea;
                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          n; Craniata; Vertebrata; El
Neobatrachia; Bufonoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Last sequence up
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 10; DB:
Pred. No. 3.76
0; Mismatches
                                                                                                         Score 9; DB 1
Pred. No. 3.76
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                          NEITHER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                frog)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                    ВУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sequence update) annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               . No.
                                                                                                                                                                                                                                                                                                    THE
                                                                                                                                                                                                                                                                                                                                                          NEUROPEPTIDE
                                                                                                DB 13; Lc..
. 3.7e+05;
1;
                                                                                                                                                                                                                                                                                                                                                                                                                                    Wallace J.C.;
Australian buzzing
skin peptides from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Wallace J.C.;
Australian buzzing
skin peptides from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               G
                                                                                                                                                                                                                                                                                                    SKIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .7e+05;
s 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13;
                                                                                                                                                                                                                                              CRC64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CRC64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  update)
                                                                                                                                                                                                                                                                                                    DORSAL
                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 6;
                                                                                                                                                                                                                                                                                                                                                          ACTIVITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Euteleostomi;
a; Hylidae;
                                                                                                                                                                                                                                                                                                    GLANDS
                                                                                                                                                               ū
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hylidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                          tree frog
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tree fro
                                                                                                                                                                                                                                                                                                                                                          NOR
                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             frog
                                                                                                      Gaps
                                                                                                         Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

RESULT

β Q

2 4

ω σ

出土日

```
밁
                                                                                                                                                                                                                                                                                                                              δã
                                                                                                                                                                                                                                                                                     RESULT
Query Match
Best Local S
Matches 1
                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                            Aust. J. Chem. 5
Amphibian skin;
MOD_RES 5
SEQUENCE 5 AA;
                                                                                                                                                                                                                                         P82071;
01-MAY-2000
01-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               P82100;
01-MAY-2000
01-MAY-2000
01-MAY-2000
                                                                    "The structure of new peptides from the 'Litoria rubella'. the skin peptide prof of evolutionary trends of amphibians."; Aust. J. Chem. 49:955-963(1996).
-!- FUNCTION: CAERLDINS SHOW NEITHER NEU ANTIBIOTIC ACTIVITY.
-!- TISSUE SPECIFICITY: SECRETED BY THE
                                                                                                                                 TISSUE-SKIN SECRETION;
Steinborner S.T., Wabnitz P.A.,
Tyler M.J., Wallace J.C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                TISSUE=SKIN SECRETION;
Wabnitz P.A., Bowie J.H.,
"Peptides from the skin g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Amphibia; Batrachia;
                                            Amphibian skin. SEQUENCE 5 AA;
                                                                                                                                                                                              KUBELLILIA 2.1.
Litoria rubella (Desert tree frog).
Eukaryota; Metazoa; Chordata; Craniata; V
Amphibia: Batrachia; Anura; Neobatrachia;
                                                                                                                                                                                                                                                                   P82071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Litoria rubella (Desert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ELECTRIN 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   P82100
                                                                                                                                                                                                                        RUBELLIDIN 2.
                                                                                                                                                                                                                                   01-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                               rubella.",
                                                                                                                                                                                                                                                                                                                                                                                                                                        Litori electrica.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=104895;
                                                                                                                                                                             NCBI_TaxID=104895;
                                                                                                                                                                                      itoria.
                                                                                                                                                                                                                                                                                                                ١--١
                                                                                                                                                                                                                                                                                                                                 G
                                                               MASS SPECTROMETRY: MW-626;
                                                                                                                                                                                                                                                                                                                F --
                                                                                                                                                                                                                                                                                                                                Y.
                                                                                                                                                                                                                                                                                                                                                                                                                       J. Chem.
l Similarity
1; Conserv
                                                                                                                                                                                                                                                                                                                                 σ
                                                                                                                                                                                                                                                                                                                 N
                                                                                                                                                                                                                                                                                                                                                 Similarity
1; Conser
                                                                                                                                                             AND MASS SPECTROMETRY
                                                                                                                                                                                                                                (TrEMBLrel.
(TrEMBLrel.
(TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (TrEMBLiel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
 Conservative
                                                                                                                                                                                                                                                                    PRELIMINARY; •
                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                              AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                        52:0-0(1999).
                                                                                                                                                                                                                                                                                                                                                                                                              Amidation.
                                                                                                                                                                                                                                                                                                                                                                                                                                       ie J.H., Tyler M.J., e skin glands of the Comparison with the
                                                                                                                                                                                                                                                                                                                                                                                              616 MW;
                                             626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sert tree frog).
Chordata; Crani
                                                                                                                                                                                                                                                                                                                                                           27.3%;
         50.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Anura;
                                             ₩;
         1.2%;
                                                                                                                                                                                                                                 13,
13,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13,
13,
                                                                                                                                                                                                                                                                                                                                                                                             AMIDATION.
61F2D1A059A00000 CRC64;
                                             6DD9C9CB10300000
                                                                                                                                                                                                                                 Created)
Last sequence up
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a; Craniata; Vo
Neobatrachia;
                                                                                                                                                                                                                                                                                                                                                 Score 9; DB 13;
Pred. No. 3.7e+0
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Created)
Last sequence
Score 8; DB 1
Pred. Nc. 3.7e
1; Mismatches
1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                    PRT;
                                                               ED BY THE SKIN METHOD=FAB.
                                                                                                                                            Waugh
                                                                                                      ne Australin 1 e profile as a
                                                                                        NEUROPEPTIDE
                                                                                                                                           R.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                        Wallace J.C.;
Australian buzzing
skin peptides from
         DB 13;
3.7e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ഗ
                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                               3.7e+05;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Vertebrata; E
a; Bufonoidea;
                                                                                                                                                                                               Vertebrata; E
a; Bufonoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                 on update)
                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          update)
                                                                                                                                             Bowie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               update)
                                                                      DORSAL
 0;
                                                                                                                                                                                                                                                                                                                                                                  Length
                  Length
                                                                                                                  probe
                                                                                         ACTIVITY
                                                                                                                            red
 Indels
                                                                                                                                            J.H.,
                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                               Euteleostomi;
a; Hylidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Euteleostomi;
a; Hylidae;
                                                                       GLANDS
                                                                                                                  e for
                                                                                                                                             Gao
                                                                                                                                                                                                                                                                                                                                                                                                                                         tree frog
                                                                                                                   the
                                                                                         NOR
0;
                                                                                                                                             0.
                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                  study
Gaps
                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                  0
 0;
```

```
ACCOCCUTION ACCOCUTION ACCOCCUTION ACCOCCU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT
Q08720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
""" 1; Conserv
밁
                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local :
                                                                                                       Matches
                                                                                                                                                                                                                                               EMBL; X68
NON_TER
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-NOV-1996
01-NOV-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-MAY-2000
01-MAY-2000
01-MAY-2000
                                                                                                                                                                                                                                                                                                                               "Novel testis germ cell specific transcript an alternatively spliced exon with multiple Endocrinology 131:2010-2015(1992).
EMBL: X68994; CAA48780.1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE-SKIN SECRETION;
Steinborner S.T., Wabnitz P.A.,
Tyler M.J., Wallace J.C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
MEDLINE-93010691; PubMed-1396344;
Waeber G., Habener c.F.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q08720;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q08720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Amphibian skin; Amidation. MOD_RES 5 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ANTIBIOTIC ACTIVITY.
-i- TISSUE SPECIFICITY: SECRETED BY THE SKIN DORSAL-i- MASS SPECIROMETRY: MM-655; METHOD-FAB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of evol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; (
Amphibia; Batrachia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "The structure of new peptides from the Australin red tree frog 'Litoria rubella'. the skin peptide profile as a probe for the study of evolutionary trends of amphibians.";
Aust. J. Chem. 49:955-963(1996).
-i- FUNCTION: CAERIDINS SHOW NEITHER NEUROPEPTIDE ACTIVITY NOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Litoria rubella (Desert tree
Eukaryota; Metazoa; Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 P82072;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P82072
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=104895;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RUBELLIDIN 3.1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PROTEIN (FRAGMENT).
                                                  u
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4 DF 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 œ
ካ
                                                  т
5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뭐..
                                                                                                                                     Similarity
                                                                                                          1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AND MASS SPECTROMETRY.
                                                                                                                                                                                                                                                     σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (TrEMBLrel.) (TrEMBLrel.) (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (TrEMBLrel.
                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                     A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         656 MW;
                                                                                                                                                                                                                                                     695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24.28;
                                                                                                                                     18.2%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Anura; Neobatrachia;
                                                                                                                                                                                                                                                     WW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13,
13,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        %
1,0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AMIDATION.
71A9C9CB10300000 CRC64;
                                                                                                                                                                                                                                                  67272EB9C735D000 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Created)
Last sequence up
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            s frog).
a; Craniata;
                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Created)
Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 8;
Pred. No.
                                                                                                                                     Score 6;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Craniata; Vertebrata; I Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Waugh R.J.,
                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 13; . 3.7e+05;
                                                                                                                                     DB 4; Le
). 3.7e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Vertebrata; E
a; Bufonoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                update)
                                                                                                                                                                                                                                                                                                                                                                                          of the CREB gene contains in-frame stop codons.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bowie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        update)
                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                         Length 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACTIVITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  J.H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Euteleostcmi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GLANDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ū
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hylidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ر.
ر
                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                       0
                                            PRESULT PRESUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRESIDET IN PRESIDENT IN PRESID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             P82192
P82182;
                                               NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN-CV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4
R 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2
2
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10
                                                  თ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              σ
```

```
01-JUN-2000 (Trimbirel. 14, Created)
01-JUN-2000 (Trimbirel. 14, Last sequence update)
01-JUN-2000 (Trimbirel. 14, Last annotation update)
CHLOROPLAST 50S RIBOSOMAL PROTEIN L10 GAMMA (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Identification of all the proteins in the large subunit organelle (chloroplast) ribosome.";
J. Biol. Chem. 3:0-0(2000).
In EVENTION: THIS PROTEIN BINDS DIRECTLY TO 238 RIBOSOMA:
I- SUBCELLULAR LOCATION: CHLOROPLAST AND OTHER PLASTIDS.
I- TISSUE SPECIFICITY: EXPRESSED IN ALL PLANT TISSUES.
I- SIMILARITY: BELONGS TO THE LIOP FAMILY OF RIBOSOMAL P.
INTERPRO, IPRO02363;
PROSITE; PS01103; RIBOSOMAL_LIO; 1.
RIBOSOMAL PROSITE; PS01103; RIBOSOMAL_LIO; 1.
                                                                                                                                                                                                                                                                                                              Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Caryophyllidae; Caryophyllaies; Chenopodiaceae; Spinacia.
                                                                                                                                                                                                                                                                                                                                                  Spinacia oleracea (Spinach).
Eukaryota; Viridiplantae; Em
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Magnoliophyta; eudicotyledons; core eudic Caryophyllales; Chenopodiaceae; Spinacia.
                                Ribosomal protein; Chloroplast;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Yamaguchi K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Spinacia oleracea (Spinach)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CHLOROPLAST 50S; RIBCSOMAL
                                                                                                                                                                                                                                                                                              NCBI_TaxID=3562;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Viridiplantae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
1; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ALWARO;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (Trembirel. 14, Created, (Trembirel. 14, Last sequence update) (Trembirel. 14, Last annotation update) (Trembirel. 14, Last annotation update) for RIBCSOMAL PROTEIN L10 BETA (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
 AA
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WARO; TISSUE-LEAF;
 675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              675 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15.2%;
100.0%
 M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             J.08;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Embryophyta; Tracheophyta; Spermatophyta;
6321B415B05DB000 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6321B415B05DB000 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 5; DB 1
Pred. No. 3.7
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                  rRNA-binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Subramanian A.R.;
eins in the large
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 eudicots;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8 10;
3.7e+05;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ä
                                                                                          RIBOSOMAL PROTEINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Caryophyllidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RIBOSOMAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                      of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of.
                                                                                                                                                RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
```

0;

0;

```
RESULT
P82541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SO TENED DO COCCO COCOCO COCCO COCCO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query
Best I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
SEQUENCE FACE.

STRAIN-GUNN;
MEDLINE-91282758; PubMed-1840486;
MEDLINE-91282758; Sato H., Aono S., Kashiwamata S., Koiwai O.;
Sato H., Aono S., Kashiwamata S., Koiwai O.;
"Genetic defect of bilirubin UDP-glucuronosyltransferase hyperbilirubinemic Gunn rat.";
hyperbilirubinemic G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INTERPRO;
PROSITE; P
Ribosomal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-0CT-2000
01-0CT-2000
01-0CT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Yamaguchi K., von Knoblauch K., Subramanian A.R.;
"Identification of all the proteins in the small subunit o
organelle (chloroplast) ribosome.";
J. Biol. Chem. 0:0-0(2000).
-!- SUBCELLULAR LOCATION: CHLOROPLAST AND OTHER PLASTIDS.
-!- TISSUE SPECIFICITY: EXPRESSED IN ALL PLANT TISSUES.
-!- MISCELLARBOUS: S19 ALPHA AND BETA FORMS DIFFER IN PI.
-!- SIMILARITY: BELONGS TO THE S19P FAMILY OF RIBOSOMAL PROTECTION OF THE STANILARITY: BELONGS TO THE S19P FAMILY OF RIBOSOMAL PROTECTION OF THE STANILARITY: BELONGS TO THE S19P FAMILY OF RIBOSOMAL PROTECTION OF THE STANILARITY: BELONGS TO THE S19P FAMILY OF RIBOSOMAL PROTECTION OF THE STANILARITY: BELONGS TO THE S19P FAMILY OF RIBOSOMAL PROTECTION OF THE S19P FAMILY OF RIBOSOMAL PROTECTION OF THE STANILARITY: BELONGS TO THE S19P FAMILY OF RIBOSOMAL PROTECTION OF THE STANILARITY: BELONGS TO THE S19P FAMILY OF RIBOSOMAL PROTECTION OF THE STANILARITY: BELONGS TO THE S19P FAMILY OF RIBOSOMAL PROTECTION OF THE STANILARITY OF THE STAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
MCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q08433
Q08433;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta; Magnollophyta; eudicotyledons; core eudicots; Caryophyllidae; Caryophyllales; Chenopodiaceae; Spinacia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-OCT-2000 (TremBLrel. 15, Last sequential of the control of the 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-NOV-1996 (TremBlrel. 01, 01-NOV-1996 (TremBlrel. 01, 01-JAN-1999 (TremBlrel. 09, UDP-GLUCURONOSYLTRANSFERASE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN=CV. ALWARO;
Yamaguchi K., von Knob.
"Identification of all
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Spinacia oleracea
Chloroplast
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            P82541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 R 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ਲ
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      h 15.2%;
Similarity 100.0%;
1; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PS00323;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IPR002222; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15.2
nilarity 100.
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Æ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RIBOSOMAL_S19; Chloroplast.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          63333735A411C000 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Last sequence update)
Last annotation update)
ROTEIN S19 BETA (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Last secuence update)
Last annotation updat
, MICROSOMAL (EC 2.4.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 5; DB 1
Pred. No. 3.7
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Craniata; Vertebrata; Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PARTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               e 5;
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          e 5;
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 10; L
3.7e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 10; L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            À
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       update)
2.4.1.17)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RIBOSOMAL PROTEINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                             CONJUGATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Euteleostomi;
; Murinae; Rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (UDPGT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                O.
                                                                                                                                                                                                                      'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

Search completed: Job time: 72 sec

March

Ó

2001,

09:43:34

```
RESULT
OPENITOR
OPENI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                    Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                 Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Matc
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q99007;
01-NOV-1996
01-NOV-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NON_TER
NON_TER
SEQUENCE
                                                                                                                                                                                        Calcium;
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AMY1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q99007
                                                                                                                                                                                                                                                       Hydrolase;
                                                                                                                                                                                                                                                                                                                                             ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Control of transient e acid and abscisic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Jacobsen J.V., Close T.J.;
"Control of transient expr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
STRAIN-HIMALAYA; TISSUE-ALEURONE
MEDLINE-91329704; PubMed-1831055;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Magnoliophyta; I
NCBI_TaxID=4513;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hordeum vulgare (Barley).
Eukaryota; Viridiplantae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Transferase; Glycosyltransferase; Microsome;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     +
                                                                                                                                                                                                                                                                                                                                                                                                            Plant Mol.
                                                                                                                                                                                                                                                                                                                                                                                                                                   aleurone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ALPHA-AMYLASE (EC
                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6 V 6
1
                                    Ν
                                                                                                                         Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Match
                                                                                                                                                                                                                                                                                              ITOME layers.";

nt Mol. Biol. 16:713-721(1991).

capalytic activity: ennosymbolysis of 1,4-alpha-glucosidic capalytic activity.

Linkages in oligosaccharides and polyasaccharides:

COSACTOR: BINDS A CALCIUM ION REQUIRED FOR ITS ACTIVITY.

COSACTOR: BINDS A FARE AT LEAST 4 TYPES OF ALPHA-AMYLASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SUBSEQUENT ELIMINATION OF POTENTIALLY TOXIC XENOBIOTICS ENDOGENOUS COMPOUNDS.

CATALYTIC ACTIVITY: UDP-GLUCURONATE + ACCEPTOR = UDP + P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUBCELLULAR LOCATION:
L; S38636; AAB19259.1;
≍ ..
                                    æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4
                                                                                                                                                                                                                                          ARLEY.
X54443; CAA38455.1; -.
X54043; CAA38455.1; -.
                                    Ν
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                     Similarity
                                                                                                                                                                                                                                   e; Glycosidase; Ca
Multigene family.
                                                                                                                                                                                        5 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (TIEMBLIE1. 01, Created)
(TIEMBLIE1. 01, Last sequence update)
(TIEMBLIE1. 08, Last annotation updat
SE (EC 3.2.1.1) (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Liliopsida;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  473
                                                                                                                                                                                             600 MW;
                                                                                                     6.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     expression of cl
d in protoplasts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MICROSOME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Embryophyta; Tracheophyta; Poales; Poaceae; Hordeum.
                                                                                                                                                                                           61E3344DD6F00000 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  633732C420000000 CRC64;
                                                                            Score 2; DB 10;
Pred. No. 3.7e+05;
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 4; DB 1; Pred. No. 3.7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LAYER
                                                                                                                                                                                                                                                                                                                                                                                                                                                     chimaeric g
                                                                                                                                                                                                                                                          metabolism;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11; I
1.7e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Multigene
                                                                                                                                                                                                                                                                                                                                                                                                                                                         genes
d from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 4;
                                                                                                                           Length
                                                                                                                                                                                                                                                          Seed;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                         by gibberellic mature barley
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Spermatophyta;
                                                                                                                                                                                                                                                            Germination;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tamily
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCEPTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,:
                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                   Gaps
```

```
Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OM protein - protein search, using sw model
                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
!:
 10
10
11
12
                                                                                                                                                                                                                                                                                                                               Pred. No. is the number of results predicted by chance to a score greater than or equal to the score of the result bear and is derived by analysis of the total score distribution
                                                                                                                                                                                                                                            Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            length: 0 length: 5
                                                                                                                                                                                                                                        Query
Match
                                                                                                                                                                 100.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13:
1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A_Geneseq_36:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     268485 seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-081-522-5
27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 RGDFV 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               March
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                  //SIDS1/gcgdata/geneseq/geneseqp/AA1999.DAT:*
//SIDS1/gcgdata/geneseq/geneseqp/AA1999.DAT:*
//SIDS1/gcgdata/geneseq/geneseqp/AA1991.DAT:*
//SIDS1/gcgdata/geneseq/geneseqp/AA1992.DAT:*
//SIDS1/gcgdata/geneseq/geneseqp/AA1993.DAT:*
//SIDS1/gcgdata/geneseq/geneseqp/AA1993.DAT:*
//SIDS1/gcgdata/geneseq/geneseqp/AA1994.DAT:*
//SIDS1/gcgdata/geneseq/geneseqp/AA1996.DAT:*
//SIDS1/gcgdata/geneseq/geneseqp/AA1997.DAT:*
//SIDS1/gcgdata/geneseq/geneseqp/AA1999.DAT:*
//SIDS1/gcgdata/geneseq/geneseqp/AA1999.DAT:*
//SIDS1/gcgdata/geneseq/geneseqp/AA1999.DAT:*
//SIDS1/gcgdata/geneseq/geneseqp/AA1999.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    \(\subset{SIDS1}/\text{gcgdata}/\text{geneseq/geneseqp/AA1980}\). DAT:*
\(\subset{SIDS1}/\text{gcgdata}/\text{geneseq/geneseqp/AA1981}\). DAT:*
\(\subset{SIDS1}/\text{gcgdata}/\text{geneseq/geneseqp/AA1982}\). DAT:*
\(\subset{SIDS1}/\text{gcgdata}/\text{geneseq/geneseqp/AA1984}\). DAT:*
\(\subset{SIDS1}/\text{gcgdata}/\text{geneseqy/geneseqp/AA1985}\). DAT:*
\(\subset{SIDS1}/\text{gcgdata}/\text{geneseqp/AA1985}\). DAT:*
\(\subset{SIDS1}/\text{gcgdata}/\text{geneseq/geneseqp/AA1985}\). DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /SIDS1/gcgdata/geneseq/geneseqp/AA1988.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /SIDS1/gcgdata/geneseq/geneseqp/AA1986
/SIDS1/gcgdata/geneseq/geneseqp/AA1987
                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2001, 09:44:54; Search time 30.08 Seconds
(without alignments)
5.684 Million cell updates/sec
   សសសសសសសសសសសស
                                                                                                                                                                                                                                            BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       34193795 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gapext 0.5
                                                                                                                                                                                                                                            占
                                                   R45384
R45386
R45387
R45387
R82387
R82389
W330557
W330557
                                                                                                                                                                                                                                                                                              SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14863
           Cell adhesion inhi
Cell adhesion inhi
Cell adhesion inhi
Cell adhesion inhi
Cyclic integrin al
Cyclic integrin al
Cyclic integrin al
Cyclic beta-5 vi
Alpha-v, beta-5 vi
Alpha-v, beta-3 ant
Alpha-v beta-3 ant
Alpha-v beta-3 ant
                                                                                                                                                                                                                                      Description
                                                                                                                                                                                                                                                                                                                                              to have a being printed,
```

																					23								Φ.			
5	5	5	5	<u>ب</u>	<u>ب</u>	5	ŗ	5	5	5	5	5	5	5	ŗ		5	5	5	5	85.2	5	5	5	5	5	5		88.	0	8	8
																					4											
20	19	19	18	18	18	18	18	8.1	18	18	18	18	18	18	13	12	12	19	19	18	15	15	15	14	14	ü	12	20	20	20	19	19
323	24	111	316	315	535	3535	535	3535	535	535	535	535	805	805	451	176	217	059	209	17	R42568	980	452	933	238	μ.	040	230	230	W92307	124	W41243
_	ha-v-beta-5	clic peptide	tegrin inhib:	tegrin inhib:	lic integri	clic integrin	clic integr	clic integrin	clic integr	clic integr	clic integrin	clic integrin	tin derivat	Biotin derivative	atelet antag	ptide #4 havin	GD-contg. pepti	PIIb/IIIa rece	etting pept	D-peptide capa	i-/tetra-c	quence of pept	Platelet aggrega	<pre>IIb/IIIa rece</pre>	brinogen recep	11 contact in	brino	clic adhesion	clic adhesion i	clic azapeptid	pha-v-beta-5 an	Alpha-v-beta-5 an
.0	~	~	د	ی	د	د	5	:3	1.5	:3	ה	23			S		Ō	O	Ð	_		t.	٠.	C†	0	Ъ	0	n	ם		Ċ	f.

 $\begin{array}{c} \textbf{4444} \\ \textbf{4444} \\ \textbf{33543} \\ \textbf{3410} \\ \textbf{3410}$

ALIGNMENTS

```
RAES982
ITM RAES98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cyclopentapeptide; cyclohexapeptide; inhibition; adhesion; animal; somatic; cell; thrombosis; myocardial infarction; apoplexy; arteriosclerosis; inflammation; angina pectoris; osteoporosis; tumour; adhesion-receptor antagonist; osteoclast;
                                                                               06-JUL-1992;
24-FEB-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Key Grante
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cell adhesion
                                                                                                                                                                                                         26-JUN-1993;
                                                                                                                                                                                                                                                                                     12-JAN-1994.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  wound healing;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         06-JUL-1994 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R45382;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R45382 standard; Protein; 5 AA.
    (MERE ) MERCK PATENT GMBH.
                                                                                                                                                                                                                                                                                                                                                                 EP579083-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              inhibition peptide (m).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              beta-3 integrin; fibrogen binding.
                                                                               92US-0909367.
93US-0022024.
                                                                                                                                                                                                         93E2-0110232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ġ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note= "Amide linkage to Arg1 forming a cyclic peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "D-form residue, Amide linkage to a cyclic peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Val5 forming
```

```
RESULT
R45384
    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R45384 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A composition containing these peptides may be used in the treatment and prophylaxis of thrombosis, mycardial infarction, appoplexy, arteriosclerosis, inflammation, angina pectoris, osteoporosis and/or tumour. They are used to induce an adhesion-receptor antagonist effect in the subject, to inhibit cell adhesion, and in the formation of osteoclasts. They may also be used in wound
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The sequences given in R45370-87 are cyclopenta- and cyclohexapeptides which act to inhibit adhesion between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Compsn. contg. cyclopenta- or hexa-peptide - inhibits adhesion animal cells, used in the treatment and prophylaxis of e.g. thrombosis, tumours, osteoporosis or inflammation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 1994-009982/02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cheresh DA,
                                                                                                                                                           EP578083-A.
                                                                                                                                                                                                                                                      Modified-site
                                                                                                                                                                                                                                                                                             Synthetic
                                                                                                                                                                                                                                                                                                                      animal; somatic; cell; thrombosis; myocardial infarction; apoplexy; arteriosclerosis; infilammation; angina pectoris; osteoporosis; tumour; adhesion-receptor antagonist; osteoclast; wound healing; beta-3 integrin; fibrogen binding.
                                                                                                                                                                                                                                                                                                                                                                           Cyclopentapeptide;
                                                                                                                                                                                                                                                                                                                                                                                                    Cell adhesion inhibition peptide (o).
                                                                                                                                                                                                                                                                                                                                                                                                                                                        R45384;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hoelzemann G,
 Hoelzemann
               Cheresh
                                                                 06-JUL-1992;
24-FEB-1993;
                                                                                                                                   12-JAN-1994
                                                                                                                                                                                                    Modified-site
                                                                                                                                                                                                                               Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                              06-JUL-1994 (first entry)
                                                                                                         26-JUN-1993;
                                        (MERE ) MERCK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                nealing compositions and to block beta-3 integrin fibrogen binding.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
nes 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 RGDFV 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 rgdfv 5
             DA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Page 7;
 Ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ű
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Diefenbach
Diefenbach B,
, Jonczyk A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A
A
                                        PATENT GMBH.
                                                                 92US-0909367.
93US-0022024.
                                                                                                         93EP-0110232
                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9pp;
                                                                                                                                                                                      /note=
                                                                                                                                                                                                                                                                                                                                                              e; cyclohexapeptide; inhibition;
cell; thrombosis; myocardial in
                                                                                                                                                                                                               'note=
                                                                                                                                                                                                                                          note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         P
                                                                                                                                                                                                               "D-form residue"
                                                                                                                                                                                     "Amide linkage to
                                                                                                                                                                                                                                        "Amide linkage to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   σı
 Felding-Habermann
Kessler H, Melzer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Felding-Habermann B,
Kessler H, Melzer G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 27;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2.1e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BB
                                                                                                                                                                                     Argl forming a cyclic peptide"
                                                                                                                                                                                                                                          Val5 forming a cyclic peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15,
 ິບ ແ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                              infarction;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gurrath
Mueller
 Gurrath
Mueller
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             animal cells
 ତ 🗷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>Θ</u> 🕱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        e
E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

Ş

```
RESULT
R45386
Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A composition containing these peptides may be used in the treatment and prophylaxis of thrombosis, mycoardial infarction, apoplexy, arteriosclerosis, inflammation, angina pectoris, osteoporosis and/or tumour. They are used to induce an adhesion-receptor antagonist effect in the subject, to inhibit cell adhesion, and in the formation of osteoclasts. They may also be used in wound healing compositions and to block beta-3 integrin fibrogen binding.
                                                                                                                                                                                                                                                                                              animal; somatic; cell; thrombosis; myocardial infarction; apoplexy; arteriosclerosis; inflammation; angina pectoris; osteoperosis; tunour; adhesion-receptor antagonist; osteoe wound healing; beta-3 integrin; fibrogen binding.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Compsn. contg
animal cells,
                                         Cheresh DA,
Hoelzemann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 1; Page 7; 9pp; English
                                                                                                                                                                                                                                                                                                                                         Cyclopentapeptide; cyclohexapeptide; inhibition;
                                                                                                                                                                                                                                                                                                                                                              Cell adhesion inhibition peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       healing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The sequences given in F
cyclohexapeptides which
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1994-009982/02.
                   WPI; 1994-009982/02
                                                   Cheresh
                                                                                              06-JUL-1992;
24-FEB-1993;
                                                                                                                                26-JUN-1993;
                                                                                                                                                                         EP576083-A.
                                                                                                                                                                                                                    Modified-site
                                                                                                                                                                                                                                                       Key
                                                                                                                                                                                                                                                                          Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                    06-JUL-1994
                                                                                                                                                                                                                                                                                                                                                                                                          R45386;
                                                                                                                                                                                                                                                                                                                                                                                                                               R45386 standard; Protein; 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         thrombosis, tumours, osteoporosis or inflammation
                                                                        (MERE ) MERCK
                                                                                                                                                    12-JAN-1994.
                                                                                                                                                                                                                                          Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 RGDFV 5
|||||
1 rgdfv 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              . Similarity
5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               contg.
                                         ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                         Diefenbach B,
, Jonczyk A,
                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     . cyclopenta- or hexa-peptide - inhibits adhesion used in the treatment and prophylaxis of e.g.
                                                                         PATENT GMBH
                                                                                             92US-0909367
93US-0022024
                                                                                                                                93EP-0110232
                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                           /note-
                                                                                                                                                                                                                               /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R45370-87 are cyclopenta- and hact to inhibit adhesion between
                                                                                                                                                                                                           *D-form residue, Amide
                                                                                                                                                                                                                               "Amide linkage
                                                                                                                                                                                               cyclic peptide"
                                         Felding-Habermann
Kessler H, Melzer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score
Pred.
                                                                                                                                                                                                                                                                                                                                                               (<u>q</u>).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27;
No.
                                                                                                                                                                                                                                 ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 15;
2.1e+05;
hes 0;
                                                                                                                                                                                                                                 Val5
                                          ڻ
ش
                                                                                                                                                                                                           linkage to
                                                                                                                                                                                                                               forming
                                                                                                                                                                                                                                                                                                                                          adhesion;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                         Gurrath
Mueller
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                           osteoclast;
                                                                                                                                                                                                                                 Ø
                                                                                                                                                                                                                               cyclic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     animal celis.
                                                                                                                                                                                                          Argl forming
                                          ი 🕱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                of
                                                                                                                                                                                                                                peptide'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
```

Compsn.

contg. cyclopenta-

or hexa-peptide

inhibits adhesion

of.

```
RESULT
R45387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
          Compsn. contg. cyclopenta- or hexa-peptide - inhibits adhesion animal cells, used in the treatment and prophylaxis of e.g. thrombosis, tumours, osteoporosis or inflammation
                                                                                                                                                                                                                                                                                                                                                                        Cyclopentapeptide: cyclohexapeptide; inhibition; adhesion; animal; somatic; cell; thrombosis; myocardial infarction; appplexy; arteriosclerosis; inflammation; angina pectoris; osteoporosis; tumour; adhesion-receptor antagonist; osteoclast; wound healing; beta-3 integrin; fibrogen binding.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A composition containing these peptides may be used in the treatment and prophylaxis of thrombosis, mycardial infarction, apoplexy, arteriosclerosis, inflammation, angina pectoris, osteoporosis and/or tumour. They are used to induce an adhesion-receptor antagonist effect in the subject, to inhibit cell adhesion, and in the formation of osteoclasts. They may also be used in wound
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The sequences given in R45370-87 are cyclopenta- and cyclohexapeptides which act to inhibit adhesion between animal cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cell adhesion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          06-JUL-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R45387 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                            Cheresh DA,
                                                                                                                                           06-JUL-1992;
24-FEB-1993;
                                                                                                                                                                                                                                                                  Modified-site
                                                                                                                                                                                                                                                                                         Misc-difference
                                                                                                                                                                                                                                                                                                                                                     Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               thrombosis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            animal cells,
                                                                                  Hoelzemann
                                                                                                                   (MERE ) MERCK PATENT GMBH.
                                                                                                                                                                              26-JUN-1993;
                                                                                                                                                                                                       12-JAN-1994
                                                                                                                                                                                                                                                                                                                Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
nes 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 RGDFV 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                rgdfv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   compositions and to block beta-3 integrin fibrogen binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    G
                                                                                Ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%;
ilarity 100.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tumours,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                Diefenbach B,
, Jonczyk A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            used in
                                                                                                                                                                                                                                                                                                                                                                                                                                               inhibition peptide (r).
                                                                                                                                                                                                                                                               /note=
                                                                                                                                           92US-0909367.
93US-0022024.
                                                                                                                                                                               93EP-0110232
                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                   /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Protein; 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gge;
                                                                                                                                                                                                                                                     /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              n the treatment and prophylaxis of e.g. osteoporosis or inflammation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        English
                                                                                                                                                                                                                                                    "Amide linkage to Argl forming a cyclic peptide"
                                                                                                                                                                                                                                                                            "D-form residue"
                                                                                                                                                                                                                                                                                                    "Amide linkage to Val5 forming a cyclic peptide"
                                                                               Felding-Habermann
Kessler H, Melzer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 27;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2.1e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 15;
                                                                                ω'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 5;
                                                                                Gurrath
Mueller
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                ΘX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                   of
f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
g X g
                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 5
                      R82386-96 are a group of inhibitor peptides of integrin alpha-v-beta-3. The inhibitor peptides may be administered in a compsn. and are useful for inhibition of inflamed tissue angiogenesis, e.g. that associated with rheumatoid arthritis, retinal angiogenesis associated with diabetic retinopathy, that associated with heemangioma, solid tumours, or solid tumour metastases. The alpha-v-beta-3 atagonists are also useful to induce apoptosis in neovasculature in a tissue. The inhibitor peptides are pref. cyclic and contain an RGD sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The sequences given in R45370-87 are cyclopenta- and cyclohexapeptides which act to inhibit adhesion between animal cells a composition containing these peptides may be used in the treatment and prophylaxis of thrombosis, myocardial infarction, apoplexy, arteriosclerosis, inflammation, angina pectoris, osteoporosis and/or tumour. They are used to induce an adhesion-receptor antagonist effect in the subject, to inhibit cell adhesion, and in the formation of osteoclasts. They may also be used in wound
                                                                                                                                                                                            Inhibition of angiogenesis in a tissue, e.g. following angioplasty - by admin. of a compsn. comprising an alpha-v-beta3 antagonist, useful for regression of established tumours, treating inflamed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 1;
                                                                                                                                                       Claim 4; Page 47; 135pp; English.
                                                                                                                                                                                                                                                           WPI; 1995-344463/44.
                                                                                                                                                                                                                                                                                                                                                                                         09-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cyclic integrin alpha-v-beta-3 inhibitor peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               03-MAY-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R82387;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R82387 standard; peptide; 5 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                      Brooks P,
                                                                                                                                                                                                                                                                                                                                               30-DEC-1994;
18-MAR-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO9525543-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Integrin; alpha-v-beta-3;
fibrinogen; inflammation;
                                                                                                                                                                                                                                                                                                                 (SCRI ) SCRIPPS RES INST
                                                                                                                                                                                                                                                                                                                                                                                                                     28-SEP-1995.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    healing compositions and to block beta-3 integrin fibrogen binding.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 RGDFV 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     տ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               rgdfv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fage
                                                                                                                                                                                                                                                                                    Cheresh DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7; .9pp;
                                                                                                                                                                                                                                                                                                                                               94US-0366665
94US-0210715
                                                                                                                                                                                                                                                                                                                                                                                          95WO-US03035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        inhibitor; apoptosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           restenosis; c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 15;
2.1e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   no.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           s; antagonist;
cyclic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
```

Sequence

Ç

ξ,

S

```
RESULT
W33057
                                                                           Query Match
Best Local Similarity
Thes 5; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT
R82389
                                           밁
                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                             R82386-96 are a group of inhibitor peptides of integrin alpha-v-beta-3. The inhibitor peptides may be administered in a compsn. and are useful for inhibition of inflamed tissue angiogenesis, e.g. that associated with rheumatoid arthritis, retinal angiogenesis associated with diabetic retinopathy, that associated with haemangioma, solid tumour metastases. The alpha-v-beta-3 atagonists are also useful to induce apoptosis in neovasculature in a tissue. The inhibitor peptides are pref. cyclic and contain an RGD sequence.
                                                                                                                                                                                                                                                                                                Inhibition of angiogenesis in a tissue, e.g. following angioplasty - by admin. of a compsn. comprising an alpha-v-beta3 antagonist, useful for regression of established tumours, treating inflamed
                                                                                                                                                                                                                                                                                                                                                                                                             30-DEC-1994;
18-MAR-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cyclic
                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                   Claim 4; Page 47; 135pp; English.
                                                                                                                                                                                                                                                                                                                                              WPI; 1995-344463/44.
                                                                                                                                                                                                                                                                                                                                                                                                                                              09-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28-SEP-1995.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO9525543-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Integrin; alpha-v-beta-3; inhibitor; angiogenesis; antagonist;
fibrinogen; inflammation; apoptosis; restenosis; cyclic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    03-MAY-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R82389;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R82389 standard;
                                                                                                                                                                                                                                                                                                                                                                                        (SCRI ) SCRIPPS RES INST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
nes 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 RGDFV 5
                                                                1 RGDFV 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rgdfv
                                          rgdfv
                                                                                                                                                                                                                                                                                                                                                                  ۵,
                                                                                                                                                                                                                                                                                                                                                                  Cheresh DA;
                                           ა
                                                                                                                                            5 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   u
                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                             94US-0366665.
94US-0210715.
                                                                                                                                                                                                                                                                                                                                                                                                                                              95WO-US03035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             alpha-v-beta-3 inhibitor peptide no.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note= "D-Val"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             peptide;
                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
AA
                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 27;
Pred. No.
                                                                                               Score 27;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                       Mismatches
                                                                                     ; DB 16;
. 2.1e+05;
ches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; DB 16;
. 2.1e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              62187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                      0
                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                      0
```

δÃ

Qy 밁

1 RGDFV 5 1 rgdfv

Conservative

0,

Indels

0;

Gaps

```
Query Match
Best Local S
Matches 5
                                                                                                                               pterygium and neovascular pannus associated with wearing contact lenses), haemangioma, solid tumours and their metastases or cytokines (especially vascular endothelial growth factor, transforming growth factor alpha or epidermal growth factor). The antagonist has the advantage of being very specific, affecting no processes other than angiogenesis and therefore of relatively low
                                                                                                                                                                                                                                                               angiogenesis in alpha-v, beta-5 containing tissue, specifically angiogenesis as a result of inflammation (especially rheumatoid arthritis), eye disease (especially diabetic retinopathy, age related macular degeneration, ocular histoplasmosis, retinopathy of
                                                                                                                                                                                                                                                                                                                                                                                                                             Inhibiting angicgenesis with an antagonist selective for the alpha-v,beta-5 integrin receptor - e.g. antibody, RGD peptide or organic mimetic, for treatment of inflammation, eye disease, tumours
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        age related macular degeneration; ocular histoplasmosis; retinopathy; prematurity; neovascular glaucoma; corneal neovascular disorder; transplantation; herpetic; keratitis; pterygium; neovascular pannus; haemangioma;
                                                                                                                                                                                                             prematurity or neovascular glaucoma), corneal neovascular disorders (especially transplantation, herpetic or luetic keratitis, pterygium and neovascular pannus associated with wearing contact
                                                                                                                                                                                                                                                                                             The present RGD containing peptide is an antagonist of the alpha-v, beta-5 vitronectin receptor, which can be used to inhibit any security property in Japha-v, beta-5 containing tissue, specifically angiogenesis in alpha-v, beta-5 containing tissue, specifically angiogenesis as a result of inflammation (especially rheumatoid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14-AUG-1995;
14-AUG-1996;
                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                 Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Brooks P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13-AUG-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27-FEB-1997.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           vascular endothelial growth factor transforming growth factor alpha;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        vitronectin receptor; inhibition; angiogenesis; inflammation;
rheumatoid arthritis; eye disease; diabetic retinopathy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        W33057 standard; peptide; 5 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO9706791-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          transforming
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            solid tumour;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alpha-v, beta-5 vitronectin receptor antagonist
                                                                                                                  coxicity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (SCRI ) SCRIPPS RES INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RGD containing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1997-165019/15.
                                                                                                                                                                                                                                                                                                                                                                                 ن.
Similarity
5; Conserv
                                                                                                                                                                                                                                                                                                                                                                             Page 105;
                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cheresh DA,
                                                                                   AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             metastasis; cytokine; low toxicity;
thelial growth factor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               95US-0514799
96ZA-0006886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               96WO-US13194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note=
                                                                                                                                                                                                                                                                                                                                                                               126pp; English.
             100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         antagonist; alpha-v, beta-5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Friedlander
 Score 27; DB
Pred. No. 2.1
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           epidermal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ×
               DB 18;
2.1e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           growth
                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             factor; cyclic
                                  Ç
```

```
RESULT
W33055
                                                                                    Query Match
Best Local Similarity
Matches 5; Conserv
                                                                                                                                                                                                                             The present RGD containing peptide is an antagonist of the alpha-v, beta-5 vitromectin receptor, which can be used to inhibit angiogenesis in alpha-v, beta-5 containing tissue, speicfically angiogenesis as a result of inflammation (especially rheumatoid arthritis), eye disease (especially diabetic retinopathy, age related macular degeneration, ocular histoplasmosis, retinopathy of prematurity or neovascular glaucoma), corneal neovascular disorders (especially transplantation, herpetic or luctic keratitis,
                                                                                                                             pterygium and neovascular pannus associated with wearing contact lenses), haemangioma, solid tumours and their metastases or cytokines (especially vascular endothelial growth factor, transforming growth factor alpha or epidermal growth factor). The antagonist has the advantage of being very specific, affecting no processes other than angiogenesis and therefore of relatively low
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            rétinopathy; prematurity; neovascular glaucoma; corneal neovascular disorder; transplantation; herpetic; luetic; keratitis; pterygium; neovascular pannus; haemangioma; solid tumour; metsatasis; cytokine; low toxicity; vascular endothelial growth factor; transforming growth factor alpha; epidermal growth factor; cyclic.
                                                                                                                                                                                                                                                                                                                                                                                                                                Inhibiting angiogenesis with an antagonist selective for the alpha-v,beta-5 integrin receptor - e.g. antibody, RGD peptide or organic mimetic, for treatment of inflammation, eye disease, tum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RGD containing peptide; antagonist; alpha-v, beta-5; vitromectin receptor; inhibition; anglogenesis; inflammation; rheumatoid arthritis; eye disease; diabetic retinopathy; age related macular degeneration; ocular histoplasmosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14-AUG-1995;
14-AUG-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    W33055 standard; peptide;
                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                    Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (SCRI ) SCRIPPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13-AUG-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  W09706791-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1997-165019/15
                                                                                                                                                                                                                                                                                                                                                                                    5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ק
                                                                                                                                                                                                                                                                                                                                                                                Page 105; 126pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cheresh DA, Friedlander M;
100.0%; ilarity 100.0%; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 95US-0514799
96ZA-0006886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     96WO-US13194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RES INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    vitronectin receptor antagonist
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note= "D-form residue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ą
 Score 27; DB
Pred. No. 2.1
); Mismatches
                 2.1e+05;
                                  DB 18;
                                  Length
```

Indels

0

Gaps

0

Query Match
Best Local Similarity
Matches 5; Conserv

100. milarity 100. Conservative

. 0.0 0;

Score 27; DE Pred. No. 2.1 0; Mismatches

. 2.1e+05; ches 0; DB 19;

0;

Gaps

0;

Length Indels

```
FRESULT RESULT FOR SECOND SECO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                    alpha-v beta-3 antagonist activity. It exhibits preferential inhibition of fibrinogen binding to the alpha-v beta-3 receptor. It can be prepared using standard solid-phase synthesis techniques. The invention relates to the discovery that angiogenesis is mediated by the specific vitronectin receptor alpha-v beta-3, and that inhibition of alpha-v beta-3 function inhibits angiogenesis. Claimed antagonists of alpha-v beta-3 comprise C-terminal fragments (see W41083-94) of human or chicken matrix metallogroteinase-2, fusion polypeptides, cyclic or linear polypeptides, derivatised polypeptides, a monoclonal antibody or organic mimetic compound. They can be used to inhibit angiogenesis in inflammed tissue (for treatment of arthritis or rheumatoid arthritis), in solid tumours or metastases (particularly to induce regression or inhibit tumour growth), and in ocular disorders such as diabetic retinopathy and macular degeneration, as well as to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Packaging material containing polypeptide antagonist of alphav, beta3 integrin - used for inhibition of angiogenesis, and for treating tumours, inflammation, eye diseases etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Angiogenesis: inhibitor; antagonist; integrin alpha-v beta-3; vitronectin receptor; rheumatoid arthritis; tumour; metastasi diabetic retinopathy; macular degeneration; restenosis; thera
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This synthetic RGD-containing cyclic peptide, designated 62184 or 66203, is a particularly preferred peptide that has integrin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             31-MAY-1996;
31-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    W41099;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   W41099 standard; Peptide; 5
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1998-032334/03.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        04-DEC-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           circular; cyclic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alpha-v beta-3 antagonist cyclic peptide 62184 (66203)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  08-JUN-1998 (first entry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (SCRI ) SCRIPPS RES INST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO9745137-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ۲,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ٥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rgdfy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RGDFV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ָש
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ۲.
   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Page 48; 234pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cheresh DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             96US-0018733
96US-0015869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         97WO-US09158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note= "D-form residue"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            restenosis; therapy
```

ρy

s

```
RESULT
W41101
                                                                             밁
                                                                                                                 This synthetic RGD-containing cyclic peptide, designated 62187, coincided to the alpha-v beta-3 antagonist activity. It exhibits preferential cyclic inhibition of fibrinogen binding to the alpha-v beta-3 receptor. It can be prepared using standard solid-phase synthesis techniques. The invention relates to the discovery that tenhiques is mediated by the specific vitronectin receptor cappingenesis is mediated by the specific vitronectin receptor inhibits angiogenesis. Claimed antagonists of alpha-v beta-3 function coinhibits angiogenesis. Claimed antagonists of alpha-v beta-3 comprise C-terminal fragments (see W41083-94) of human or chicken matrix metalloproteinase-2, fusion polypeptides, cyclic or linear polypeptides, a monoclonal antibody or organic mimetic compound. They can be used to inhibit angiogenesis in inflammed tissue (for treatment of arthritis or rheumatoid arthritis), in solid tumours or metastases (particularly to induce regression or inhibit tumours or metastases (particularly to induce as diabetic retinopathy and macular degeneration, as well as to
Query Match
Best Local S
Matches 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Angiogenesis; inhibitor; antagonist; integrin alpha-v beta-3; vitronectin receptor; rheumatoid arthritis; tumour; metastasis; diabetic retinopathy; macular degeneration; restenosis; therapy circular; cyclic:
                                                                                                                                                                                                                                                                                                                                                                                                                                   Packaging material containing polypeptide antagonist of alphav. beta3 integrin - used for inhibition of angiogenesis, and for treating tumours, inflammation, eye diseases etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        31-MAY-1996;
31-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     04-DEC-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alpha-v beta-3 antagonist cyclic peptide 62187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   08-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              W41101 standard;
                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                      Example 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (SCRI ) SCRIPPS RES INST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO9745137-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10
 Local Similarity
nes 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RGDFV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rgdfv 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cheresh DA;
                                                                             σi
                                                                                                                                                                                                                                                                                                                                                                                                    Page 48; 234pp;
100.0%;
ilarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry
                                                                             Ą,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         96US-0018733.
96US-0015869.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97WO-US09158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Peptide;
                                                                                                           (all claimed).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ÇΊ
                                                                                                                                                                                                                                                                                                                                                                                                      English.
Score 27; DB 19; Pred. No. 2.1e+05; Mismatches 0;
                              Length 5;
```

0;

Indels

0;

Gaps

0

Query Match
Best Local Similarity
Matches 5; Conserv

Conservative

0

Mismatches

0

Gaps

0

.1e+05;

Length Indels

100.0%; Score 27; 100.0%; Pred. No.

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
  This synthetic RGD-containing cyclic peptide, designated 121974 or CC 85189, is a particularly preferred peptide that has integrin CC alpha-v beta-3 antagonist activity. It can be prepared using Standard solid-phase synthesis techniques. The invention relates CC vitropectin receptor alpha-v beta-3 and that inhibition of alpha-v beta-3 function inhibits anglogenesis. Claimed antagonists of CC beta-3 function inhibits anglogenesis. Claimed antagonists of CC alpha-v beta-3 comprise C-terminal fragments (see W41083-94) of CC cyclic or linear polypeptides, derivatised polypeptides, and concelled arthritis, and concelled art
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Packaging material containing polypeptide antagonist of alphav, beta3 integrin - used for inhibition of angiogenesis, and for treating tumours, inflammation, eye diseases etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Angiogenesis; inhibitor; antagonist; integrin alpha-v beta-3; vitronectin receptor; rheumatoid arthritis; tumour; metastasis; diabetic retinopathy; macular degeneration; restenosis; therapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   31-MAY-1996;
31-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          W41109 standard; Peptide; 5 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Brooks
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             circular; cyclic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alpha-v beta-3 antagonist cyclic peptide 121974 (85189).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             08-JUN-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  W41109;
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 1; Page 51; 234pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1998-032334/03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO9745137-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (SCRI ) SCRIPPS RES INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 RGDFV
|||||
1 rgdfv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
  ĄĄ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 96US-0018733
96US-0015869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              97WO-US09158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note= "valine residue NH2 terminal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   methylated"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           restenosis; therapy
```

S

G

```
RESULT
W41240
 FFFXgx
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                        The present peptide represents an alpha-v-beta-5 integrin antagonists. Alpha-v-beta-5 is a vitronectin receptor. Inhibitors of alpha-v-beta-5 can inhibit angiogenesis. The specification describes a novel labelled package that contains an inhibitor of angiogenesis i.e. an alpha-v-beta-5 antagonising polypeptide that binds to integrin alpha-v-beta-5 and includes a part of the C-terminal domain of MMP-2. The antagonists are used to inhibit angiogenesis in inflamed tissue, in solid tumours or metastases, and in a wide range of ocular disorders (e.g. diabetic or other forms of retinopathy, neovascular glaucoma, or corneal transplants). They are particularly used to induce regression or to inhibit growth of tumours. The alpha-v-beta-5 antagonists can also be used to treat restenosis caused by migration of smooth muscle cells following angioplasty and to reduce blood supply to selepted tissues. The antagonists particularly inhibit neovascularisation where this is
                                           induced by cytokines, e.g. transforming growth factor alpha, epicermal growth factor or especially vascular endothelial growth factor note: this sequence does not appear in the specification; it was creat.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alpha-v-beta-5 antagonist; treatment; vitronectin receptor; inhibition; anglogenesis; tumour growth; restenosis; neovascularisation.
Sequence
                                                                                                                                                                                                                                                                                                                                          Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                      Packaging material containing polypeptide antagonist of alphav, beta5 integrin - used for inhibition of anglogenesis, and for
                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1998-041758/04.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (SCRI ) SCRIPPS RES INST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         31-MAY-1996;
31-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     04-DEC-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alpha-v-beta-5 antagonistic peptide 62184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                09-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                W41240;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              W41240 standard; protein; 5 AA.
                                 using information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RGDFV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rgdfv
                                                                                                                                                                                                                                                                                                                                                                        tumours, inflammation, eye diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             s
   ຜ
                                                                                                                                                                                                                                                                                                                                          Page 41; 117pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        96US-0013733.
96US-0015869.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       97WO-US03099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note= "D-form residue"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   provided.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Friedlander M;
                                              it was created
```

Query Match
Best Local Similarity
Matches 5; Conserv

Conservative

0

Score 27; DB 19; Pred. No. 2.1e+05; ; Mismatches 0;

Length 5; Indels

0

Gaps

0

Query Match Best Local Similarity

100.0%;

Score Pred. 27; No.

DB 19; 2.1e+05;

Sequence

v

Ā

100.0%;

```
RESULT
W41243
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q
                                                         alpha-v-beta-5 antagonising polypeptide that binds to integrin alpha-v-beta-5 and includes a part of the C-terminal domain of MMP-2. The antagonists are used to inhibit anglogenesis in inflamed tissue, i solid tumours or metastases, and in a wide range of ocular disorders (e.g. diabetic or other forms of retinopathy, neovascular glaucoma, or corneal transplants). They are particularly used to induce regression to inhibit growth of tumours. The alpha-v-beta-5 antagonists can also used to treat restenosis caused by migration of smooth muscle cells following angioplasty and to reduce blood supply to selected tissues. The antagonists particularly inhibit neovascularisation where this is induced by cytokines, e.g. transforming growth factor alpha, epidermal growth factor or especially vascular endothelial growth factor.
                                                                                                                                                                                                                                                           The present peptide represents an alpha-v-beta-5 integrin antagonists. Alpha-v-beta-5 is a vitronectin receptor. Inhibitors of alpha-v-beta-5 can inhibit angiogenesis. The specification describes a novel labelled package that contains an inhibitor of angiogenesis i.e. an
                                                                                                                                                                                                                                                                                                                                                                                         Packaging material containing polypeptide antagonist of alphav, beta5 integrin - used for inhibition of anglogenesis, and for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              31-MAY-1996;
31-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            04-DEC-1997.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alpha-v-beta-5 antagonist; treatment; vitronectin receptor; inhibition; angiogenesis; tumour growth; restenosis; neovascularisation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alpha-v-beta-5 antagonistic peptide 62187.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          09-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          W41243;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        W41243 standard; protein; 5 AA
                                                                                                                                                                                                                                                                                                                                            Disclosure; Page 41; 117pp; English.
                                                                                                                                                                                                                                                                                                                                                                           treating tumours, inflammation, eye diseases etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1998-041753/04.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO9745447-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Misc-difference
                            using information provided.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (SCRI ) SCRIPPS RES INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      lilli
1 rgdfv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 RGDFV
                                             this sequence does not appear in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            u
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cheresh DA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              96US-0018733
96US-0015869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            97WO-US09099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note= "D-form residue"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "peptide is made cyclic via the first and last residues"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Friedlander
                                             it was created
                                                                                                                                                                                                               in
                                                                                                                                              þe
                                                                                                                                                                 e
```

Š

멂

```
RESULT
W41247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
Query Match
Best Local Similarity
Matches 5; Conserv
                                                                                                                                                                                                                                      can inhibit angiogenesis. The specification describes a novel labelled package that contains an inhibitor of angiogenesis i.e. an alpha-v-beta-5 antagonising polypeptide that binds to integrin alpha-v-beta-5 and includes a part of the C-terminal domain of MMP-2. The antagonists are used to inhibit angiogenesis in inflamed tissue, in solid tumours or metastases, and in a wide range of ocular disorders (e.g. diabetic or other forms of retinopathy, neovascular glaucoma, or corneal transplants). They are particularly used to induce regression or to inhibit growth of tumours. The alpha-v-beta-5 antagonists can also be used to treat restenosis caused by migration of smooth muscle cells following angioplasty and to reduce blood supply to selected tissues. The antagonists particularly inhibit neovascularisation where this is induced by cytokines, e.g. transforming growth factor alpha, epidermal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Packaging material containing polypeptide antagonist of alphav, beta5 integrin - used for inhibition of angiogenesis, and for treating tumours, inflammation, eye diseases etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          31-MAY-1996;
31-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       W41247;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        W41247 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              anglogenesis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alpha-v-beta-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alpha-v-beta-5 antagonistic peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      09-JUN-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The present peptide represents an alpha-v-beta-5 integrin antagonists. Alpha-v-beta-5 is a vitronectin receptor. Inhibitors of alpha-v-beta-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1998-041758/04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  04-DEC-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO9745447-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (SCRI)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RGDFV 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rgdfv 5
                                                                                                                                                                                        factor or especially vascular endothelial growth factor or especially vascular endothelial growth factors.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SCRIPPS RES INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Page 38; 117pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          96US-001E733.
96US-0015869.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   antagonist;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  97WO-US09099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note= "D-form residue"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein; 5 AA
                                                                                                                                                                      provided.
                    100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              growth;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Friedlander M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     treatment; vitronectin receptor; inhibition;
  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 restenosis;
                 Score 27; DB 19;
Pred. No. 2.1e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 neovascularisation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                              Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
0;
                                                                                                                                                                                             was created
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
  0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
V
                                              This invention is concerned with novel cyclic peptides of formula cyclo(aArg-aGly-aAsg-aX-aY) where aArg = Arg or aza-Arg, aGly = Gly or aza-Arg, ally = Gly or aza-Arg, ally = Alg or aza-Arg, acly = Gly or aza-Arg, ally = Alg, Arg, Cys, Gln, Glu, Gly, His, Ile, Ieu, Lys, Met, Nle (norleucine), Orn (ornithine), Phe, Phg (phenylglycine), Pro, Ser, Thr, Tic (tetrahydroisoquinoline-3-carboxylic acid), Trp, Tyr, Val or NH-Q-CO, or the corresponding aza-amino acids, Q = 1-6C alkylene, at least one amino acid (aa) in the peptide has the alpha-carbon atom replaced by nitrogen also the aa may be derivatised and are coupled together by peptide bonds and optically active amino acids may be in D- or L-forms. The peptides are integrin inhibitors, specifically for treating and preventing thrombosis, cardiac infarct, coronary heart disease, arteriosclerosis, tumours, osteoporosis, inflammation and infections, or generally any disease where angiogenesis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cardiac infarct; coronary heart disease; arteriosclerosis; tumour; osteoporosis; inflammation; infection; angiogenesis; antimicrobial; diagnosis; platelet metabolism; fibrinogen receptor; cancer; metast
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Key
Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cyclic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  W92307 standard; peptide; 5
                                                                                                                                                                                                                                                                                    Claim 3a;
                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1999-072017/07
                                                                                                                                                                                                                                                                                                                                                                                                                    Goodman SL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    04-JUL-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  04-JUL-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   07-JAN-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DE19728524-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               vitronectin receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cyclic azapeptide #1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-APR-1999
inflammation and infections, or generally any disease where angiogenesi is involved, in human or veterinary medicine. The peptides also have antimicrobial activity, are used for diagnosis and location of thrombi, and for studying metabolism of platelets at different stages of
                                                                                                                                                                                                                                                                                                                                New cyclic penta:peptide(s) containing aza-amino acid - are inhibitors of integrin ligand interaction, used to treat e.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   (MERE ) MERCK PATENT GMBH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              intracellular signalling; GpIIb/IIIa receptor; matrix metalloproteinase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 RGDFV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 rgdfv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 peptide; azapeptide; integrin inhibitor;
                                                                                                                                                                                                                                                                                Page 11; 12pp;
                                                                                                                                                                                                                                                                                                                  cardiac infarct,
                                                                                                                                                                                                                                                                                                                                                                                                                  Jonczyk A, Kessler H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  97DE-1028524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  97DE-1028524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
1..5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "The carboxy group of Val(5) is of the amino group of Arg(1) to for peptide. Not true N- and C- terr Val(5) can be modified by N-Me"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "can be D-form residue"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "aza-Gly"
                                                                                                                                                                                                                                                                                    German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 be D-form
                                                                                                                                                                                                                                                                                                                 d interaction, used to treat e.g. coronary heart disease and tumours
                                                                                                                                                                                                                                                                                                                                                                                                                    Schmitt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   residue"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  arteriosclerosis;
                                                                                                                                                                                                                                                                                                                                                                                                                    Ç
                                                                                                                                                                                                                                                                                                                                                                                                                      Wermuth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              is condensed or oform a cyclic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 thrombosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     metastasis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 onto
```

```
CC activation or intracellular signalling mechanisms of the fibrinogen
CC receptor, and for affinity purification of integrins. The peptides
CC inhibit interaction between the alpha v, beta 3 and beta 5 receptors with
CC their ligands, e.g. they prevent binding of fibrinogen to the SpIID/IIIa
CC complete the preventing metastatic spread of cancers, and prevent
CC binding of matrix metalloproteinase to the vitronectin (alpha v beta 3)
CC receptor. This sequence is a specific claimed example of a novel peptide
CC of the invention.
XX
SQ Sequence 5 AA;

Ouery Match
Best Local Similarity 100.0%; Score 27; DB 20; Length 5;
Best Local Similarity 100.0%; Pred. No. 2.1e+05;
Matches 5; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 1 RGDFV 5
Db 1 rgdfv 5

Search completed: March 6, 2001, 09:45:52

Job time: 58 sec
```

THIS PAGE BLANK (USPTO)

and the second of the second o

```
Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Post-processing: Minimum Match
Maximum Match
Listing first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Maximum DB seq length: 0
Maximum DB seq length: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       on:

    No. is the number of results predicted by chance to have a
re greater than or equal to the score of the result being printed,
is derived by analysis of the total score distribution.

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                    100.0
                                                                                                                                                                                                                                                                                                                                                                                                           Match
                                                                                                                                                                                                                                                                                                                                                                                                                           Query
  BLOSUM62
Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-081-522-5
27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Issued_Patents_AA: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             174772 seqs, 17957048 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RGDFV 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /cgn2_6/ptodata/2/laa/5A_COMB.pep:*
/cgn2_6/ptodata/2/laa/5B_COMB.pep:*
/cgn2_6/ptodata/2/laa/sCOMB.pep:*
/cgn2_6/ptodata/2/laa/pcTUS_COMB.pep:*
/cgn2_6/ptodata/2/laa/backfiles1.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gapext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  08
1008
45 St
                                                                                                                                                                                           US-08-210-715-5

US-08-210-715-7

US-08-366-665-7

US-08-366-665-7

US-08-616-770-2

US-07-932-200-10

US-08-668-871-12

US-08-668-871-12

US-08-669-683-12

US-08-387-749-10

US-08-387-749-10

US-08-387-749-10

US-08-387-749-10

US-08-387-749-10
           US-08-315-026B-10

US-08-616-770-1

US-08-754-773B-10

US-09-141-127-23

US-09-155-721-1

US-09-155-721-2

US-09-155-721-6

US-09-155-721-6

US-09-155-721-6

US-09-155-721-8

US-09-155-721-8

US-09-155-721-9

US-09-155-721-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                     SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ltd
                                     Sequence 5, Appli
Sequence 7, Appli
Sequence 7, Appli
Sequence 10, Appli
Sequence 10, Appli
Sequence 11, Appli
Sequence 12, Appli
Sequence 12, Appli
Sequence 10, Appli
Sequence 20, Appli
Sequence 20, Appli
Sequence 20, Appli
Sequence 20, Appli
Sequence 10, Appli
Sequence 10, Appli
Sequence 11, Appli
Sequence 10, Appli
Sequence 10, Appli
Sequence 11, Appli
Sequence 22, Appli
Sequence 23, Appli
Sequence 24, Appli
Sequence 5, Appli
Sequence 5, Appli
Sequence 5, Appli
Sequence 6, Appli
Sequence 7, Appli
Sequence 6, Appli
                                                                                                                                                                                                                                                                                                                                                                                                           Description
             Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
OTHER INFORMATION:
```

45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	
21	21	22	22	22	22	22	22	22	22	22	22	22	22	22.	22	22	
									81.5								
υı	ភ	S	ъ	Ç,	ហ	ر ت	σ	ъ	5	ភ	σ	5	U	Сī	υı	ហ	
μ	ъ.	ω	w	w	ω	ω	ω	ω	ω	ω	ω	ω	w	ω	ω	ω	
US-08-210-715-9	US-08-210-715-6	US-08-594-387A-40	US-08-694-387A-39	US-08-694-387A-38	US-08-694-387A-37	-80	US-08-694-387A-34	US-08-694-387A-33	-08-69	US-08-694-387A-30	US-08-694-387A-29	-80-	-08-694-387A	US-08-694-387A-24	US-08-694-387A-23	US-08-694-387A-22	
Sequence 9, Appli	Sequence 6, Appli	Sequence 40, Appl	Sequence 39, Appl	Sequence 38, Appl	Sequence 37, Appl	Sequence 35, Appl	•	•	Sequence 32, Appl	`	•	Sequence 27, Appl	•	-	23,	Sequence 22, Appl	

ALIGNMENTS

FRAGMENT TYPE: INTERNAL FEATURE: NAME/KEY: Peptide LOCATION: 1.5 OTHER INFORMATION: /1 OTHER INFORMATION: /COTHER INFORMATION: COTHER INFORMATION: Le	Oz Hia	REGISTRATION HUMBER: 34,163 REGISTRATION HUMBER: TSI TELECOMMUNICATION INFORMATION: TELEPHONE: (519) 554-2937 TELEFAX: (519) 554-6312 INFORMATION FOR SEQ ID NO: 5: SEQUENCE CHARACTERISTICS: LENGTH: 5 amino acids	TYPE TYPE TING S TRE: APPLI APPLI APPLI APPLI APPLI APPLI APPLI APPLI APPLI	CORRESPONDENCE ADDRESS: CORRESPONDENCE ADDRESS: ADDRESSE: Office of ADDRESSE: Research STREET: 10665 No. 57 CITY: La Jolla STATE: CA COUNTRY: USA 7TP: 92037	ъ
nai /label= cyclo /note= "Cyclo signifies a cyclic peptide; lower case letters indicate a D-amino acid; capital letters indicate a L-amino acid."	le de	"134,163 34,163 MMBER: TSRI 419.0 ORNATION: 54-2937 -6312 NO: 5: ICS:	ABLE FORM: : Floppy disk : Floppy disk IBM PC compatible YSTEM: PC-DOS/MS-DOS YSTEM: PC-DOS/MS-DOS PATCHIN Release #1.0, Version #1.25 CATION DATA: : NUMBER: US/08/210,715 :: 18-MAR-1994 TON: 514 TON: 514	14 S: of Patent Counsel, The Scripps in Institute 5753230th Torrey Pines Road, TPC-8	US/08210715 Peter David A METHODS AND COMPOSITIONS USEFUL FOR INHIBITION OF ANGIOGENESIS

```
밁
                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-210-715-5
                                                                                                                                    US-08-210-715-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-210-715-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -08-210
Sequence 7, App. 1
Sequence 7, App. 1
Sequence 7, App. 1
Sequence 7, App. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                           Matches
                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: (619) 554-6312 INFORMATION FOR SEQ ID NO: 7:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Brooks, Pe
APPLICANT: Cheresh, D
TITLE OF INVENTION: M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:
NAME: Fitting, Thomas
                                                                                                                                                                                                                                                                       HYPOTHETICAL:
ANTI-SENSE:
                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
LENGTH: 5 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                  MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                      TELECOMMUNICATION INFORMATION: TELEPHONE: (619) 554-2937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                      RAGMENT TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Release #1.0,
                                                                                                                                                 OTHER INFORMATION: OTHER INFORMATION:
                                                                                                                                                                                           NAME/KEY: Peptide LOCATION: 1..5 OTHER INFORMATION:
                                                         Local Similarity
nes 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                    REGISTRATION NUMBER: 34.
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/0 FILING DATE: 18-MAR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CITY: La Jolla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: Office of Patent Counsel, The Scripps ADDRESSEE: Research Institute STREET: 10666 No. 5753230th Torrey Pines Road, TPC-8
                                                                                                                                                                              OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                            TYPE: amino acid
STRANDEDNESS: si
                                                                                                                                                                                                                                                                                                                 TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RGDFV 5
                             RGDFV 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 92037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
5; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Application US/08210715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C<sub>A</sub>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               USA
                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Brooks, Peter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                   circular
                                                                                                                                                                                                                                                                                     ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Floppy disk
                                                                                                                                                                                                                                                      internal
                                                                                                                                                                                                                                                                                                  peptide
                                                                                                                                                                                                                                                                                                                               single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  David A
METHODS AND COMPOSITIONS USEFUL
INHIBITION OF ANGIOGENESIS
                                                                       100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%;
                                                                                                                                                 /label= cyclo ./note= "Cyclo signifies a cyclic peptide; lower case letters indicate a D-amino acid; capital letters indicate a L-amino acid."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US/08/210,715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  34,163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       TSRI 419.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 27;
Pred. No. :
                                                                       Score 27;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1.3e+05;
                                                                         1.3e+05;
                                                                                        DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1;
                                                                                       Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                         0;
                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                           0
```

```
RESULT 4
US-08-366-655-7
                                                          멍
                                                                                    ġ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-366-665-5
                                                                                                                                                                                        US-08-366-665-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 5, Applicati
Patent No. 5766591
GENERAL INFORMATION:
                                                                                                                  Matches
                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX: (619) 554-6312 INFORMATION FOR SEQ ID NO: 5: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08
FILING DATE: 18-MAR-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                              HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE/DOCKET NUMBER: TS
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE:
                                                                                                                                                                                                      OTHER INFORMATION:
OTHER INFORMATION:
OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                          RAGMENT TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE: Office of Patent Counsel, The Scripps ADDRESSEE: Research Institute STREET: 10666 No. 5766591th Torrey Pines Road, TPC-8 CITY: La Jolla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PPLICANT: Cheresh, ITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM PC
OPERATING SYSTEM:
                                                                                                                                                                                                                                                             NAME/KEY:
                                                                                                                Local Similarity es 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 30-DEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                              STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REGISTRATION NUMBER:
                                                                                       1 RGDFV 5
                                                                                                                                                                                                                                                                                                                                                                                                           ENGTH:
                                                          RGDFV
                                                                                                                                                                                                                                                                                                                      SENSE:
                                                                                                                                                                                                                                                                                                                                                                                            amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CA
USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Application US/08366665
                                                                                                                                                                                                                                                                                                                                                                                                            5 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Brooks,
                                                                                                                                                                                                                                                                                                                        ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                            Peptide
                                                                                                                                                                                                                                                                                                                                                                 circular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IBM PC compatible SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (619)
                                                                                                                                                                                                                                                                                                                                      No.
                                                                                                                                                                                                                                                                                                          internal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30-DEC-1994
                                                                                                                                                                                                                                                                                                                                                  peptide
                                                                                                                                                                                                                                                                                                                                                                                single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    554-2937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             David A METHODS AND COMPOSITIONS USEFUL INHIBITION OF ANGIOGENESIS
                                                                                                                  100.0%; 1
100.0%; 1
tive 0;
                                                                                                                                                                                                      /label - cyclo /label - cyclo signifies a cyclic peptide; lower /note - case letters indicate a D-amino acid; capital letters indicate a L-amino acid."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US/08/366,665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     08/210,715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TSRI 419.1
                                                                                                                               Score 27;
Pred. No.
                                                                                                                   1.3e+05;
                                                                                                                                                DB 1;
                                                                                                                                             Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FOR
                                                                                                                   0;
                                                                                                                   Gaps
```

Sequence 7, Appli Patent No. 576659

Application US/08366665

```
밁
                                                                                                                                                               US-08-616-770-2
                                                                                                                                                                                                                                                                                                                                                                                ; OTHER INFORMATION: US-08-366-665-7
                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Matches 5; Conserv
                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: (619) 554-63 INFORMATION FOR SEQ ID NO:
                                                              APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE: po
HYPOTHETICAL: NO
ANTI-SENSE: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REGISTRATION NUMBER: 34,163
REFERENCE/DOCKET NUMBER: TSRI 419.1
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619) 554-2937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 18-MAR-1994
ATTORNEY/AGENT INFORMATION:
NAME: Fitting, Thomas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION: 424
PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: PatentIn Rel
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FRAGMENT TYPE:
APPLICANT:
                 APPLICANT
                                                  APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                               LOCATION: 1.5
OTHER INFORMATION:
OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STREET: 10666 | CITY: La Jolla STATE: CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: FILING DATE: 30-DE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: amino acid
STRANDEDNESS: sir
                                                                                                                                                                                                                                                                 1 RGDFV 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WAME/KEY: Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NDDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OUNTRY:
                                                                                                                                 ŏ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       92037
                                                                                                                                 , Application US/08616770 5849692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    E: Research Institute
10666 No. 5766591th Torrey Pines Road, TPC-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       USA
                                                                                                                                                                                                                                                                                                Conservative
             Diefenbach, Beate
Kessler, Horst
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 circular
                                                               Holzemann, Gunter
Felding-Habermann,
                                              Rippmann, Friedrich
                                                                                                Jonczyk, Alfred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Patentin Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Office of Patent Counsel, The Scripps Research Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30-DEC-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                internal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JMBER: US 08/210,715
18-MAR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                554-6312
Roland
                                                                                                                                                                                                                                                                                                              100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     David A METHODS AND COMPOSITIONS USEFUL FOR INSTITUTION OF ANGIOGENESIS
                                                                                                                                                                                                                                                                                                                                                                                            /label= cyclo /note= "Cyclo signifies a cyclic peptide; lower case letters indicate a D-amino acid; capital letters indicate a L-amino acid."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US/08/366,665
                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                              Score 27; DB 1;
Pred. No. 1.3e+05;
                                                               Brunhilde
                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                              Length 5;
                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                              0
```

```
δõ
                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Thes 5; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; MOLECULE TYPE: US-08-616-770-2
                                                                                                                                                                                                                                                                                                   RESULT 6
US-07-932-200-10
                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                    Patent No.
                                                                                                                                                                                                                                                                       Sequence 10, Appl
Patent No. 536686
                                                                                                                                                                                                                                     GENERAL INFORMATION:
APPLICANT: VENTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION FOR SEQ ID NO:
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                                                          NUMBER OF SEQUENCES: 20
CORRESPONDENCE ADDRESS:
ADDRESSEE: BROWDY AND NEIMARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: DE P 43 10 643.9 FILING DATE: 01-APR-1993 ATTORNAY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS LENGTH: 5 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/220,858
FILING DATE: 31-MAR-1994
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELECOMMUNICATION INFORMATION: TELEPHONE: 703-243-6333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
                                                                                                                                                                         TITLE OF INVENTION:
                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STREET: 2200
CTTY: Arlington
                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION:
                                                                               STATE:
                                                                                              CITY: WASHINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY: circular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Heaney, Brion P: REGISTRATION NUMBER: 32, REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: FILING DATE: 15-MAF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                    ZIP: 20004
                                                             COUNTRY:
                                                                                                           STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                             1 RGDFV 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                 1 RGDFV 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      amino acid
                                                                               ם,ם
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       64191
                                                                                                                                                                                                                                                                                   Application US/07932200
                                                                                                              419 SEVENTH STREET, N.W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2200 Clarendon
                                                                 U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    703-243-6410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Wermuth, Jochen
VENTION: Cyclic Peptides Containing Arg-Gly-Asp, and
VENTION: Derivatives Thereof, as Adhesion Inhibitors
                                                                                                                                                                                                      HOPFINGER, ANTON J.
LE BRETON, GUY
                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                          VENTON,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Millen, White, Zelano & Branigan, P.C. 00 Clarendon Boulevard, Suite 1400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15-MAR-1996
                                                                                                                                                                         METHOD FOR GENERATING AND SCREENING USEFUL PEPTIDES
                                                                                                                                                                                                                                         DUANE L
                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     us/08/616,770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                32,542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ۵.
                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MERCK 1566C1
                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 27;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                              1.3e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
```

```
RESULT 7
US-08-596-116A-68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 68, Application US/08596116A Patent No. 5721213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                              ATTORNEY/AGENT INFORMATION:
NAME: Toffenetti, Judith L.
                                                                                                                                                                                                                                                         COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS 6.2
SOFTWARE: Wordberfect 6.1 for Windows
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                             ZIP: 20036
COMPUTER READABLE FORM:
MEDIUM TYPE: 3+ Flop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION DATA:
APPLICATION NUMBER: US
,FILING DATE: 21-AUG-19
                                                                                    APPLICATION NUMBER: PCT/JP94/C
FILING DATE: 29 SEP 1994
APPLICATION NUMBER: JP 245541
FILING DATE: 30 SEP 1993
APPLICATION NUMBER: JP 50602
FILING DATE: 22 MAR 1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REGISTRATION NUMBER: 28,005
REFERENCE/DOCKET NUMBER: VE
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-628-5197
REGISTRATION NUMBER: 39,048
REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                          PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS
ADDRESSEE: Kenyon &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: SATO, YOShimi
APPLICANT: HAYASHI, YOShio
APPLICANT: KATADA, Jun
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCES:
                                                                                                                                                                                                          APPLICATION NUMBER: US/08/596,116A FILING DATE: 30 JAN 1996 CLASSIFICATION: 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ITLE OF INVENTION: No. 5721213el Peptic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE: 202-737-3526
                                                                                                                                                                                                                                                                                                                                                                                                   CITY: Washington STATE: D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity les 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: lir
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: 202-
TELEX: 248633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGENT INE P.
COOPER, IVER P.
28,005
                                                                                                                                                                                                                                                                                                                                                                                                                                   E: Kenyon & Kenyon
1025 Connecticut Avenue, N.W., Suite 600
                                                                                                                                                                                                                                                                                                                                                                                   USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KATADA, Jun
VENTION: No. 5721213el Peptides, Active as Inhibitors of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PatentIn
                                                                                                                                                                                                                                                                                                                               3+ Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21-AUG-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PC-DOS/MS-DOS
in Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                85.2%;
                                                                                                                                                                        PCT/JP94/01611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  us/07/932,200
                                                                                                                                        245541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VENTON-1B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 23;
                   2002/3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1.3e+05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; 'Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
```

В

```
밁
; TOPOLOGY: 1:
; MOLECULE TYPE:
US-08-668-871-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-668-871-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 12,
Patent No. 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                         TELEFAX: (201)
INFORMATION FOR SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IEM FC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                             CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                           SEQUENCE CHARACTERISTICS
                                                                                                                        REFERENCE/DOCKET NUMBER: RATELECOMMUNICATION INFORMATION: TELEPHONE: (201) 235-4205
                                                                                                                                                                                     APPLICATION NUMBER: CH 2: FILING DATE: .31-AUG-1992 ATTORNEY/AGENT .INFORMATION: NAME: Kass, Alan P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
ADDRESSEE: Hoffmann-La Roche Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                      REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                              FILING DATE
                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                                                                                 FILING DATE:
                                                            LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 RGDF 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                   RY: United States of America 07110-1199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2, Application US/08668871
5811389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nutley
                                           amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New Jersey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                340 Kingsland Street
                                                              4 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Trzeciak, Arnold
VENTION: TRI- AND TETRACYCLIC COMPOUNDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mueller, Klaus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Obrecht, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Grieder, Alfred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         202-429-0796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Knierzinger, Andreas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bannwarth, Wilhelm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 peptide
              peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  85.2%; Du
100.0%; Pr
0;
                                                                                                                                                                                                                                   CH 2725/92
                                                                                                                                                                                                                                                                08/105,508
                                                                                                                                                                                                                                                                                                                             US/08/668,871
                                                                                                                                                                     32142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            68:
                                                                                                                                                        RAN 4781/1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
```

Query Match
Best Local Similarity
Matches 4; Conserv

Conservative

85.2%; Score 23; DB 2; L 100.0%; Pred. No. 1.3e+05; Live 0; Mismatches 0;

Length 4;

Indels

0;

```
S
                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                     멍
                                                                           US-08-387-749-10
                                                                                                                                                                                                                                                                         ; MOLECULE TYPE: peptide US-08-669-683-12
                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 12,
                                           Patent No.
                                                          Sequence 10,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -08-669-683-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION UNBER: 08/106,508
FILING DATE: 31-AUG-1992
FILING DATE: 31-AUG-1992
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                               INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER: RAN 4781/1
TELECOMMUNICATION INFORMATION:
TELEPHONE: (201) 235-4205
                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Trzecia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
APPLICANT: VENTON, DUANE L.
APPLICANT: HOPFINGER, ANTON J.
                                                                                                                                                      1 RGDF 4
                                                                                                                                                                                                                                                                                                    TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                       REGISTRATION NUMBER: 32142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                 LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŏ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RY: United States of America 07110-1199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nutley
                                           5814460
                                                                                                                                                                                                                                                                                                                   amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New Jersey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Application US/08669683
                                                          Application US/08387749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           340 Kingsland Street
                                                                                                                                                                                                                                                                                                                                 4 amino acids
                                                                                                                                                                                              85.2%;
ilarity 100.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Knierzinger, Andreas
Mueller, Klaus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Trzeciak, Arnold
VENTION: TRI- AND TETRACYCLIC COMPOUNDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Obrecht, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Grieder, Alfred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gerber, Fernand
                                                                                                                                                                                                                                                                                                                                                                               (201)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bannwarth, Wilhelm
                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hoffmann-La Roche Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alan P
                                                                                                                                                                                                                                                                                                                                                         1) 235
, 235-3500
, NO: 12:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US/08/669,683
                                                                                                                                                                                               0
                                                                                                                                                                                                            Score 23; pred. No.
                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                           DB 2;
                                                                                                                                                                                                               1.3e+05
                                                                                                                                                                                              0,
                                                                                                                                                                                                                          Length 4;
                                                                                                                                                                                              Indels
                                                                                                                                                                                              0;
                                                                                                                                                                                              0;
```

```
US-08-335-832-25
Sequence 25, Applicat
Patent No. 5925331
GENERAL INFORMATION:
                                                                                                                                                                                                                                  밁
                                                                                                                                                                              RESULT 11
                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                               ; MOLECULE TYPE: US-08-387-749-10
                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: US 07/932,200
FILING DATE: 21-AUG-1992
PRIOR APPLICATION DATA:
APPLICATION UNMER: US 07/813,315
FILING DATE: 21-AUG-1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/US91/00891
FILING DATE: 14-FEB-1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/480,865
FILING DATE: 14-FEB-1990
ATTORNEY/AGENT INFORMATION:
NAME: COOPER, ITER P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE/DOCKET NUMBER: VE
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-628-5197
TELEPHAX: 202-737-3528
           APPLICANT: Lister-James, John
TITLE OF INVENTION: Technetium-99m Labeled Peptides
TITLE OF INVENTION: Thrombus Imaging
NUMBER OF SEQUENCES: 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/US93/08231
FILING DATE: 09-AUG-1993
                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 4 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/08/387,749 FILING DATE: 21-Feb-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE:
                                                                                                                                                                                                                                  1 RGDF 4
                                                                                                                                                                                                                                                                      1 RGDF 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WASHINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             D.C.
                                                                                                                                            Application US/08335832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              E: BROWDY AND NEIMARK
419 SEVENTH STREET, N.W.
                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LE BRETON, GUY
                                                                                      Dean, Richard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      METHOD FOR GENERATING AND SCREENING USEFUL PEPTIDES
                                                                                                                                                                                                                                                                                                                        100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28,005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10:
                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VENTON-1C
                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                           Length 4;
                                                                                                                                                                                                                                                                                                         Indels
                                                    for
                                                                                                                                                                                                                                                                                                         0
```

E: Banner & Allegretti, Ltd. 10 South Wacker Drive Suite 3000

```
RESULT 12
US-08-753-781-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                          SOFTWARE: PA
                                                                                                                                                                                                                                                                                                                                                                    GENERAL
                                                                                                                                                                                                                                                                                                                                                                                  Sequence 20, Appli
Patent No. 5951981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/08/753,781C CURRENT FILING DATE: 1996-12-02 NUMBER OF SEQ ID NOS: 40
                                                                                                                                                                                                                                                                                              APPLICANT: Swenson, Stephen
APPLICANT: Flores Sanchez, Eladio
                                                                                                                                                                                                                                                                                                                                              ENERAL INFORMATION: APPLICANT: Markland Jr.,
                                                                                                                                                                                                                                                              TITLE OF INVENTION: THROMBOLYTIC AGENTS WITH ANTITHROMBOTIC ACTIVITY FILE REFERENCE: DITI 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                APPLICANT: Bush, Larry R
                                                 NAME/KEY: MOD_RES
LOCATION: (1)
OTHER INFORMATION: meercaptoacetyl
OTHER INFORMATION: Description of Artificial Sequence:synthetic OTHER INFORMATION: peptide
                                                                                                                       ORGANISM: Artificial Sequence
                                        FEATURE:
                                                                                                     FEATURE:
                                                                                                                                                       ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IHM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STREET: LUCITY: Chicago
CITY: Chicago
CITY: Illinois
TSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OTHER INFORMATION:
OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: 312 -- 5317
TELEX: 910-221-5317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: FILING DATE: 05-JA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: No. 5925331nan, Kevin
REGISTRATION NUMBER: 35,303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: Modified-site LOCATION: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RGDF 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           amino acid
                                                                                                                                                                                            PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                    Application US/08753781C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  312-715-1234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    05-JAN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       85.2%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /label= ma /note= "The amino terminus is modified by covalent linkage to an mercaptoacetyl group."
                                                                                                                                                                                                                                                                                                                                                Francis S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    us/08/335,832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kevin E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   92,216-I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1.3e+05;
hes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

밁

```
PCT-US93-08231-10
                                                                                                             밁
                                                                                                                                                                                                                                       G-08-361-864-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-361-864-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÕ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-753-781-20
                           Sequence 10, Applicat GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 28, Patent No. 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                   Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                         INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM.FC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US/07/9:
FILING DATE: 19921002
ATTORNEY/AGENT INFORMATION:
NAME: No. 5977064nan, Kevin
REGISTRATION NUMBER: 35,303
REGISTRATION NUMBER: 35,303
                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                             TELEPHONE: 312-715-1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION: 514
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
               APPLICANT:
                                                                                                                                                                                                                                                                                                                        TELEFAX: 31-
TELEFAX: 910-221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ITLE OF INVENTION: Multime
ITLE OF INVENTION: Agents
                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET: 10 South
CITY: Chicago
STATE: Illinois
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                                                                                                                  TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY: U
                                                                                                                                                                                                                                                                                           LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER:
                                                                                                              1 RGDF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 RGDF 4
                                                                                                                                        1 RGDF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 RGDF 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5977064
                                                                                                                                                                                                                                                                            amino acid
                                        Application PC/TUS9308231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Application US/08361864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 E: Allegretti & Witcoff, Ltd.
10 South Wacker Drive, Suite 3000
                                                                                                                                                                                                                                                                                           4 amino acids
VENTON, DUANE L.
HOPFINGER, ANTON J.
                                                                                                                                                                                                                                                                                                                                                 312-715-1234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Lister-James,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Dean, Richard
                                                                                                                                                                                                                                                   peptide
                                                                                                                                                              85.2%; Dr
100.0%; Pr
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.08; F1
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Multimeric Polyvalent Antithrombotic
                                                                                                                                                                                                                                                                                                                                                                                                                                                            US/07/955,466A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US/08/361,864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      John
                                                                                                                                                                                Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                          92,668
                                                                                                                                                                                                                                                                                                                                                                                                                  Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1.3e+05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                   Indels
                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
```

APPLICANT:

```
ADHESIVE EFFECTS

NUMBER OF SEQUENCES: 27

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/527,198

FILING DATE: 21-MAY-1990

PRIOR APPLICATION DATA:
APPLICATION NUMBER: 414,144

FILING DATE: 28-SEP-1989

SEQ ID NO.12:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; LENGTH: 4 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
PCT-US93-08231-10
                                              Query Match
Best Local Similarity
----hes 4; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
""" onserve
 뮹
                             δÃ
                                                                                                                                         ;
5330911-12
                                                                                                                                                                                                                                                                                                                                              RESULT 15
5330911-12
;Patent No. 5330911
..... APPLICANT: HUBBELL, JEFFREY A.;MASSIA, STEPHEN P.;DESAI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                       NEIL P.
TITLE OF INVENTION: SURFACES HAVING DESIRABLE CELL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: 202-737-3528
TELEX: 248633
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 4 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
ATTORNEY/AGENT INFORMATION:
NAME: COOPER, IVER P.
REGISTRATION NUMBER: 28,005
REFERENCE/DOCKET NUMBER: VENT
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-628-5197
TELEPHONE: 202-737-3528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: LE BRETON,
TITLE OF INVENTION: N
TITLE OF INVENTION: NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US93/08231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
ADDRESSEE: BROWDY AND NEIMARK
STREET: 419 SEVENTH STREET, N.W.
1 RGDF 4
||||
1 RGDF 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY: U
ZIP: 20004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 RGDF 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: WASHINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LE BRETON, GUY
                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           85.2%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            METHOD FOR GENERATING AND SCREENING USEFUL PEPTIDES
                                                                            85.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VENTONIC.PCT
                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                               .3e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .3e+05;
                                                               0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Indels
                                                                                           Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 4;
                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Gaps
                                                           Gaps
                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
```

Search completed: March 6, 2001, 09:45:18 Job time: 25 sec

THIS PAGE BLANK (USPTO)

```
Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Minimum DB seq length: 0
Maximum DB seq length: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Run on:
          Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 pIR_66:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query
Match Length
       195891 seqs, 67900655 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-081-522-5
27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       March 6, 2001, 09:44:54; Search time 20.46 Seconds (without alignments)
16.594 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RGDFV 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   벎
                              PT0711
A32516
PQ0689
B6144692
B6144692
B6144692
B614692
B707033
PT0690
PT06703
PT0679
PT0679
PT0679
PT0679
S47552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           205
autho-RF amide neu myosin-light-chain ubiquitin - rat cocoonase (EC 3.4. T-cell receptor be T-cell receptor be T-cell receptor be T-cell receptor be blood cell protein serrawettin W2 - S hypothetical protetraM protein - Escactin I - malaria T-cell receptor be spinal cord peptid
                                                                                                                                                                                                                                                                                                                                                                                            photosystem I 10.4 fullcin - glant Af Leu-enkephalin - b Met-enkephalin - b T-cell receptor be antho-RFamide neur
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       T-cell receptor be cholecystokinin-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Description
```

ALIGNMENTS

				.:	
Qy 2 GD 3 Db 3 GD 4 RESULT 2 A32516 cholecystokinin-5 - dog N;Alternate names: CCK-5 C;Species: Canis lupus familiaris (dog)	tal; T-ce ch l Sir 2;	A;Accession: PTUS/O A;Status: translation not shown A;Molecule type: mRNA A;Residues: 1-4 <fe4> A;Experimental source: day 19 fetal thymus, strain BALB/c, 141-11 A;Accession: PTUS/O A;Status: translation not shown A;Molecule type: DNA A:Residues: 1-4 <fe5> A;CESSION: TYPES</fe5></fe4>	A; Accession. FIRM; A; Molecule type: DNA A; Molecule type: DNA A; Residues: 1-4 <fe2> A; Experimental source: day 18 fetal thymus, strain BALB/c, 140-1G A; Accession: PT0678 A; Status: translation not shown A; Molecule type: DNA A; Residues: 1-4 <fe3> A; Experimental source: day 18 fetal thymus, strain BALB/c, 154-1L</fe3></fe2>	J. Exp. Med. 174, 115-124, 1991 A;Title: Junctional sequences of fetal T cell receptor beta chains have few N regions A;Reference number: PT0509; MUID:91277601 A;Accession: PT0607 A;Status: translation not shown A;Molecule type: mRNA A;Residues: 1-4 <fei> A;Experimental source: newborn thymus, strain BALB/c, 120-2J A;Accession: PT0674</fei>	RESULT 1 PT0711 T-cell receptor beta chain V-D-J region (120-2J) - mouse (fragment) C;Species: Mus musculus (house mouse) C;Date: 17-Jul-1992 #sequence_revision 17-Jul-1992 #text_change 30-May-1997 C;Accession: PT0607; PT0674; PT0678; PT0570; PT0711; PT0710

edu.

```
A;Molecule type: protein
A;Residues: 1-5 <OHT>
C;Keywords: amidated carboxyl end; D-amino acid; neuropeptide
F;2/Modified site: D-asparagine (Asn) #status experimental
F;5/Modified site: amidated carboxyl end (Val) #status experimental
                                                                                                                                                                                                                       C;Accession: A44692
R;Ohta, N.; Kubota, I.; Takao, T.; Shimonishi, Y.; Yasuda-Kamatani, Y.; Minakata, Biochem. Biophys. Res. Commun. 178, 486-493, 1991
A;Title: Fulicin, a novel neuropeptide containing a D-amino acid residue isolated A;Reference number: A44692; MUID:91315471
A;Accession: A44692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           photosystem I 10.4K Hi chain - common tobacco (fragment)
C;Species: Nicotiana tabacum (common tobacco)
C;Date: 19-May-1994 #sequence_revision 19-May-1994 #text_change 17-Mar-1999
C;Accession: PQ0689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: protein
A; Residues: 1-5 <SHI>
C; Comment: This peptide corresponds to the five carboxyl-terminal residues
C; Superfamily: gastrin
C; Keywords: amidated carboxyl end; neuropeptide
F; 5/Modified site: amidated carboxyl end (Phe) #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R;Shively, J.; Reeve Jr., J.R.; Eysselein, V.E.; Ben-Avram, (Am. J. Physiol. 252, G272-G275, 1987)
A;Title: CCK-5: sequence analysis of a small cholecystokinin A;Reference number: A32516; MUID:87153871
A;Accession: A32516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C; Date: 18-Oct-1989
C; Accession: A32516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R;Obokata, J.; Mikami, K.; Hayashida, N.; Nakamura, Plant Physiol. 102, 1259-1267, 1993
A;Title: Molecular heterogeneity of photosystem I. A;Reference number: PQ0667; MUID:94105345
A;Accession: PQ0689
                ģ
                                                                                                                                                                                                                                                                                                                         fulicin - giant African snail
C;Species: Achatina fulica (giant African snail)
C;Date: 23-Mar-1995 #sequence_revision 05-Apr-1995 #text_change 11-Jul-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: protein A; Residues: 1-5 < OBO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;Keywords:
                                                                  Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                 w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18-Oct-1989 #sequence_revision 18-Oct-1989 #text_change 18-Aug-2000
                                                                                                                                                                                                                                                                                                                                                                                                   4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DF 5
                 DFV
                                                                                                                                                                                                                                                                                                                                                                                                                                                     9<u>-</u>9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      chloroplast; photosynthesis; photosystem
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity 100
2; Conservative
                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                  Conservative
                                                                  44.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0.
                                                  1;
                                                                  Score 12; DB 2;
Pred. No. 2e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 12; DB Pred. No. 2et 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 12;
Pred. No.
                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 2;
2e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 2;
2e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            psab,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .
.
                                                                                  Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ļ;
                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sugiura,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        thylakoid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            psaE, psaF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             c.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Vigna, S.R.; Walsh,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                canine brain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              psaH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cholecystc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DsaL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and
                                                                                                                                                                                                                                                              from
                                                                                                                                                                                                                                                                                             H.; No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                intes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                J.H
                                                                                                                                                                                                      T-cell receptor beta chain V-D-J region (100-4AL) . (Species: Mus musculus (house mouse) C;Date: 17-Jul-1992 #sequence_revision 17-Jul-1992 C;Accession: PT0513; PT0606.
                                                              A,Title: Junctional sequences of fetal T cell receptor A;Reference number: PT0509; MUID:91277601 A;Accession: PT0513 A;Status: translation not shown A;Residues: 1-5 <FEE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Met-enkephalin blue mussel
C;Species: Mytilus edulis (blue mussel)
C;Date: 07-Oct-1994 #sequence_revision
C;Accession: A61445
                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Experimental source: pedal ganglia
C:Keywords: neuropeptide; opioid peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: protein A; Residues: 1-5 < LEU>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Proc. Natl. Acad. Sci. U.S.A. 81, 955-958, A;Title: Isolation and identification of er A;Reference number: A61445; MUID:84144823 A;Accession: A61445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R; Leung, M.K.; Stefano, G.B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  융
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Experimental source: pedal ganglia C; Keywords: neuropeptide; opioid pep
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: protein A; Residues: 1-5 < LEU>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Reference number: A61445; A; Accession: B61445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Proc. Natl. Acad. Sci. U.S.A. 81, 955-958, 1984
A; Title: Isolation and identification of enkephalins
A; Reference number: A61445; MUID:84144823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R; Leung, M.K.; Stefano, G.B. Proc. Natl. Acad. Sci. U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C;Species: Mytilus edulis (blue mussel)
C;Date: 07-Oct-1994 *sequence_revision 07-Oct-1994 *text_change 21-Jan-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    멂
                 A; Accession:
A; Status: tra
                                A; Experimental source: adult thymus, A; Accession: PT0606
                                                                                                                                                                        R;Feeney, A.J.
J. Exp. Med. 174, 115-124, 1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Leu-enkephalin -
                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local s
Matches 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Accession: B61445
                                                                                                                                                                                                                                                                                                                                                  2 GGFM 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 GGFL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 GDFV.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ω
                                                                                                                                                                                                                                                                                                                                                                                   2 GDFV 5
                 translation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ΕFV
type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
2; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
2; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  σı
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                blue mussel
                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                 not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                     50.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   44.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       peptide
                                                                                                                                                                                                                                                                                                                                                                                                                     ۲,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 12;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 12;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. 2e+
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                  strain BALB/c,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              07-Oct-1994 #text_change 21-Jan-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8, 1984
enkephalins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 2;
2e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 2;
2e+05;
                                                                                                                                                                                                                            #text_change 30-May-1997
                                                                                                                                                                                                                                                                                                                                                                                                                     ۳.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ۲,
                                                                                                                                                                                                                                                                mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 5;
                                                   clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             'n
                                                                                                                                                          beta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            pedal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            pedal
                                                                                                                                                          chains have
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ganglia of Mytilus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ganglia
                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of
                                                                                                                                                           few
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mytilus
                                                                                                                                                           z
                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

20

δÃ

j

regions

```
R; Feeney, A.J.
J. Exp. Med. 174, 115-124, 1991
A; Title: Junctional sequences of fetal T cell receptor beta chains have few A; Reference number: PT0509; MUID:91277801
                                                                          A;Experimental source: newborn thymus, strain BALB/c C;Keywords: T-cell receptor
                                                                                                         A;Accession: PT0703
A;Status: translation not shown
A;Molecule type: DNA
A;Residues: 1-5 <FEE>
                                                                                                                                                                                                                               T-cell receptor beta chain V-D-J region (135-IF) - mouse (fragment) C;Species: Mus musculus (house mouse) C;Date: 17-Jul-1992 #sequence_revision 17-Jul-1992 #text_change 30-C;Accession: PT0703
                                                                                                                                                                                                                                                                                                                                                                                        2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Molecule type: mRNA
A;Residues: 1-5 <FE2>
A;Experimental source: newborn thymus, strain BALB/c,
C;Keywords: T-cell receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Title: Junctional sequences of fetal T cell receptor beta chains have few N regions. A;Reference number: PT0509; MUID:91277601
A;Accession: PT0538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R; Feeney, A.J.
J. Exp. Med. 174, 115-124, 1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Residues: 1-5 <FE2>
A;Experimental source: newborn thymus, strain BALB/c, clone 120-1S C;Keywords: T-cell receptor
                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Experimental source: day 18 fetai thymus, strain BALB/c, A;Accession: PT0603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Status: translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               T-cell receptor beta chain V-D-J region (126-1F) -
Query Match
Best Local S
Matches 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;Species: Mus musculus (house mouse)
;Date: 17-Jul-1992 #sequence_revision 17-Jul-1992
;Accession: PT0538; PT0539; PT0603
                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               :Molecule type: mRNA
:Residues: 1-5 <FE3>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Experimental source: day 13 fetal; Accession: PT0539; Status: translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;Molecule type: mRNA
;Residues: l-5 <FEE>
                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Status: translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity hes 2; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3 GD 3
GD 4
                                                                                                                                                                                                                                                                                                                                                                                         2 GD 3
                                                                                                                                                                                                                                                                                                                                                            ω
                                                                                                                                                                                                                                                                                                                                                          g =
                                                                                                                                                                                                                                                                                                                                                            4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
2; Conserv
Similarity
2; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                       44.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.08;
              44.4%; Score 12;
100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 12; DB; Pred. No. 2e+
0; Mismatches
 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 12;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          thymus, strain BALB/c,
 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 2;
2e+05;
              DB 2;
2e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 2;
2e+05;
0
                                                                                                                                                                                                                                                 #text_change 30-May-1997
                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #text_change 30-May-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mouse (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 5;
                             Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   clone 100-2AC
Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             clone 126-1H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        clone 126-1F
0
                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                    5.
                                                                                                                                                                                  N regions.
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Db
3
                                                                                                                                                                   RESULT
PT0679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
PT0573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
```

```
T-cell receptor beta chain V-D-J region -
(;Speckes: Mus musculus (house mouse)
C;Date: 17-Jul-192 *sequence_revision 17-
C;Accession: PT0679; PT0708
                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
"---ches 2; Conserv
                                                                J. Exp. Med. 174, 115-124, 1991
J. Exp. Med. 174, 115-124, 1991
A;Title: Junctional sequences of fetal T cell
A;Reference number: PT0509; MUID:91277601
                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Molecule type: mRNA
A;Residues: 1-5 <FEE>
A;Experimental scurce: day 19 fetal thymus,
C;Keywords: T-cell receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  R; Feeney, A.J.
174, 115-124, 1991
1. Exp. Med. 174, 115-124, 1991
A; Title: Junctional sequences of fetal T cell receptor beta chains have few N regions A; Reference number: PT0509; MUID:91277801
A; Accession: PT0573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          T-cell receptor beta chain V-D-J region (141-1CC) - mouse (fragment) C;Speckes: Mus musculus (house mouse) C;Deckes: N-vul-1992 *sequence_revision 17-Jul-1992 *text_change 30-May-1997 C;Accession: PT0573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      J. Exp. Med. 174, 115-124, 1991
A; Title: Junctional sequences of fetal T
A; Reference number: PT0509; MUID:91277601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Species: Mus musculus (house mouse)
C;Date: 17-Jul-1992 #sequence_revision 17-Jul-1992
C;Accession: PT0690
A; Molecule type:
A; Residues: 1-5
                                 A; Accession: PT0679
A; Status: translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Status: translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C; Keywords: T-cell receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Molecule type: DNA
A; Residues: 1-5 < FEE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Accession: PT0690
A;Status: translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R; Feeney, A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    T-cell receptor beta chain V-D-J region (140-1BD) - mouse (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Experimental source: day 18 fetal thymus, strain BALB/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 2; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3 GD 4
                                                                                                                                                                                                                                                                                  2 GD 3
11
3 GD 4
                                                                                                                                                                                                                              12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3 2 GD 3
GD 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2
GD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ω

<FEE>

                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     44.48; Suc
100.08; Pr
'''9 0;
                                                                                                                                                                                                                                                                                                                                                 44.4%; scc.
100.0%; Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             score 12; DB
h; Pred. No. 2e+
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                         Score 12;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                         17-Jul-1992 #text_change 30-May-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cell receptor beta
                                                                                                                                                                                           mouse (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 2;
2e+05;
                                                                                                                                                                                                                                                                                                                                                                         DB 2;
2e+05;
                                                                                       receptor
                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BALB/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #text_change 30-May-1997
                                                                                                                                                                                                                                                                                                                                                                                         Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 5;
                                                                                       beta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              chains have
                                                                                       chains
                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                       have
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                       few N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                few
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                z
                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                       regions
```

```
C;Accession: A25844
C;Accession: A25844
R;Grimmelikhuijzen, C.J.P.; Groeger, A.
FEBS Lett. 211, 105-108, 1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: protein
A; Residues: 1-4 <GRIP.
C; Comment: The function of this peptide is not known but it could act as a transmitter C; Comment: Synthetic and natural peptides. had identical properties.
C; Superfamily: RFamide neuropeptide
C; Keywords: amidated carboxyl end; neuropeptide; pyroglutamic acid
E; 1/Modified site: pyrrolidone carboxylic acid (Gln) #status experimental
F; 4/Modified site: amidated carboxyl end (Phe) #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R;Grimmelikhuijzen, C.J.P.; Graff, D.—9821, 1986
Proc. Natl. Acad. Sci. U.S.A. 83, 9817-9821, 1986
A;Title: Isolation of <Glu-Gly-Arg-Phe-NH2 (Antho-RFamide), a neuropeptide from sea anem
A;Reference number: A26666; MUID:87092339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Experimental source: day 18 fetal thymus, strain BALB/c, 154-2J
A;Accession: PT0708
A;Status: translation not shown
                                                                                                                                                                                             A;Reference number: A25844
A;Accession: A25844
A;Accession: A25844
A;Molecule type: protein
A;Residues: 1-4 <GRI>
C;Keywords: amidated carboxyl end; neuropeptide; pyroglutamic acid
F;L/Modified site: pyrrolicone carboxylic acid (cln) #status experimental
F;4/Modified site: amidated carboxyl end (phe) #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                         autho-RF amide neuropeptide - sea pansy (Renilla koellikeri)
C;Species: Renilla koellikeri (Koelliker's sea pansy)
C;Date: 21-May-1988 #sequence_revision 30-Sep-1993 #text_change 11-Jul-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Watches 2; Conserva
망
                                  ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         antho-Framide neuropeptide - sea anemone (Anthopleura elegantissima)
C;Species: Anthopleura elegantissima
C;Species: Anthopleura elegantissima
C;Date: 31-Dec-1988 #sequence_revision 31-Dec-1988 #text_change 08-Dec-1995
C;Accession: A26666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C; Keywords: T-cell receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: DNA
A; Residues: 1-5 <FE2>
                                                                                                                                                                                                                                                                                                                                                      A; Title: Isolation of the neuropeptide pGlu-Gly-Arg-Phe-amide from the pennatulid Renil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Experimental source: newborn thymus, strain BALB/c, 161-2B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
                                                                                                            Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                     Matches
                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                     Local Similarity
nes 2; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N
                                           1 RGDF 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 RGDF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   - GD 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            မ္မ
  QGRF
                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              50.0%;
                                                                                                          40.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    44.4%; Score 12;
100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                     1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 11; DB 1;
Pred. No. 2e+05;
1; Mismatches
                                                                                                          Score 11; DB 2;
Pred. No. 2e+05;
                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 2;
2e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                     1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 5;
                                                                                                                                 Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

Search completed: Job time: 155 sec

March

ò

2001, 09:47:29

k

ά

el El

```
RESULT
S39390
                                                                                                                                                                                                                          R;Komatsu, H.; Ikebe; M.
Blochem. J. 296, 53-58, 1993
Blochem. J. 296, 53-58, 1993
A;Title: Affinity labelling of smooth-muscle myosin light-chain kinase with 5'-[p-(f. A;Reference number: S39390; MUID:94071841
A;Accession: S39390
                                                                                                                                                                                                                                                                                                                                           myosin-light-chain kinase (EC 2.7.1.117), smooth muscle - turkey (fragment)
C;Species: Meleagris gallopavo (common turkey)
C;Date: 19-Mar-1997 #sequence_revision 10-Oct-1997 #text_change 07-May-1999
밁
                              Š
                                                                                                                                                          C; Keywords: phosphotransferase;
                                                                                                                                                                       A; Molecule type: protein
A; Residues: 1-4 < KOM>
A; Experimental source: gizzard
                                                                                                                                                                                                                                                                                                                              C; Accession: S39390
                                                                     Matches
                                                                                      Query Match
Best Local
 2 GKF 4
                                 2 GDF 4
                                                                   Similarity 2; Conserv
                                                                     Conservative
                                                                                      40.78;
                                                                                                                                                              smooth muscle
                                                                     0;
                                                                                      Score 11;
Pred. No.
                                                                     Mismatches
                                                                                      DB 2;
2e+05;
                                                                     1;
                                                                                                         Length 4;
                                                                       Indels
                                                                     0;
                                                                     Gaps
                                                                       0
```

٠,

```
Post-processing: Minimum Match
Maximum Match
Listing first
                                                                                                                                                                                                                                                                                                                                      Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                Perfect score: Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OM protein -
                                                                                                                                                                                                                               Result
                                                                                                                                                                                                                                                                                          Database
                                                                                                                                                                                                                                                                                                                                                            Total number of
                                                                                                                                                                                                                                                                                                                                                                           Searched:
                                                                                                                                                                                                                                                                                                                                                                                                Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                               Title
                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                            90.:
                                                                                                                                                                                                                                                           Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                       Score
                                                                                                                                                                                                                                                                                                                                     seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein search, using sw model
               length:
length:
                                                                                                                                                                                                                                                                                                                                                           hits satisfying chosen parameters:
                                                                                                                                                                                                                       Match
                                                                                                                                                                                                                                                                                                                                                                                        BLOSUM62
Gapop 10.0 , Gapext
               88757 seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                US-09-081-522-5
27
1 RGDFV 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                            March
                                                                                                                                                                                                                                                                                         SwissProt_39:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen
                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                       uО
                                                                                                                                                                                                                                                                                                                                                                                                                                                           6,
                                                                                                                                                                                                                                                                                                                                                                                                                                            2301, 09:45:22; Search time:12.72 Seconds
(without alignments)
12.694 Million cell updates/sec
32294092 residues
                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                        100%
100%
                    FMRE MACNI
GRAM, LIUMAN
LUXE VIBFI
ACHI_ACHFU
DCML_PSECH
EOSI_HUMAN
FAR3_HIRME
FAR4_HIRME
AL14_CARMA
BIOA_CITFR
BIOA_SALTY
FARP_ARTIR
SUGA_ACHDO
UC22_MAIZE
UF01_MOUSE
TUFT_HUMAN
BIOB_SALTY
PRCT_ERRAM
RM01_YEAST
DCMS_PSECH
                                                                                                                                                                         UXA4_CHLTR
TPIS_CANFA
PAP2_PARMA
TRM3_ECOLI
FLRF_HIRME
BPP7_BOTIN
THYL_PIG
BIOB_CITER
                                                                                                                                                                                                                                                                                                        summaries
                                                                                                                                                                                                                                              SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                         0.5
                                                                                                                                                                                                                                                                                                                                                                                  ...
                                                                                                                                                                                                P38005 chlamydia t
P54714 canis famil
                                                                                                                                                                                                                      Description
                                  8 zea mays (m
9 mus musculu
8 homo sapien
8 salmonella
3 periplaneta
                                                                                                             pseudomonas
homo sapien
hirudo medi
hirudo medi
                    saccharomyc
pseudomonas
                                                                        artioposthi
acheta dome
                                                                                               carcinus ma
                                                                                                                                            achatina fu
                                                                                                                                                    homo sapien
vibrio fisc
                                                                                                                                                                 macrocallis
                                                                                                                                                                          hirudo medi
                                                                                                                                                                                 pardachirus
escherichia
                                                                                        salmonella
```

ALIGNMENTS

å

4 FV

0

```
RESULI 1
UXA4_CAL
IDA _CAL
IDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT
TPIS_CA
                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
Query Match
Best Local S
Matches 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 100
Matches 2; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pentose shunt.
NON_TER
NON_TER
SEQUENCE 5 AJ
                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE.
SEQUENCE.
TISSUS-HEART:
TISSUS-HEART:
MEDLINE-98163340; PubMed-9504812:
Meeler C.H.;
Mheeler C.H.;
                                                                                                                                                                                                                                                             Dunn M.J., Corbett J.M., Wheeler C.H.;

"HSC-2DPAGE and the two-dimensional gel electrophoresis database of dog heart proteins.";

Electrophoresis 18:2795-2802(1997).

-I- CATALYTIC ACTIVITY: D-GLYCERALDEHYDE 3-PHOSPHATE - DIHYDROXY-ACETONE PHOSPHATE.

-I- SUBUNIT: HOMODIKER (BY SIMILARITY).

-I- SUBUNIT: HOMODIKER (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN-L2/434/BU;
Bini L., Santucci A., Magi
Comanducci M., Christianen
Pallini V.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TPIS_CA
P54714;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CANFA
                                                                                                                                                                           INTERPRO; IPRO00652; -.
PROSITE; PS00171; TIM; PARTIAL.
Isomerase; Glycolysis; Gluconeogenesis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Canis familiaris (Dog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence update)
15-JUL-1998 (Rel. 36, Last annotation update)
TRIOSEPHOSPHATE ISOMERASE (EC 5.3.1.1) (TIM)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HSC-2DPAGE; P54714; DOG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8=8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CANFA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ω
Similarity
2; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5 AA; 474 MW;
    Conservative
                                                                                                    AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STANDARD;
                                                                                                      550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           44.48; SU
100.08; Pr
                  37.0%;
                                                                                                                         σμ
                                                                                                      M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               75BAA865AA800000 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .
Θ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 s; Score 12; DB
s; Pred. No. 8.9
0; Mismatches
                                                                                                    54444862C9A00000 CRC64;
                    Score 10;
Pred. No.
    ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Marzocchi
Birkelund
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 1; L
8.9e+04;
                         8.9e+04;
                                         DB 1;
                                                                                                                                                                                Fatty
                                                                                                                                                                                                                                                                                                                                                                                                       electrophoresis database of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ς;
,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sanchez-Campillo |
Vtretou E., Ratti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (FRAGMENT)
                                                                                                                                                                                    acid
                                       Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OF,
                                                                                                                                                                                    biosynthesis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              THIS UNKNOWN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       i G.,
  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
```

RESULT 3
PAP2_PARMA

멍

F

```
TRM3
                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 2
                                                  SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

MEDLINE-88227859; PubMed=2836369;
Inamoto S., Yoshioka Y., Ohtsubo E.;

"Identification and characterization of tary genes of plasmid R100.";

J. Bacteriol. 170:2749-2757(1988).

-i - FUNCTION: TRANSFER GENE PROTEIN. IS I.

PROCESS OF BACTERIAL CELLS FOR THE EX.

-i - SUBCELLULAR LOCATION: CYTOPLASMIC.
                                                                                                                                                                                                                                01-JAN-1990
01-JAN-1990
15-DEC-1998
                                                                                                                                                                                                                                                               TRM3_ECOLI P13973;
                                                                                                                                                                                                                                                                                                                                                                                                                               NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lazarovici P., Primor N., Loew L.M.;
"Purification and pore forming activity of two hydr
polypeptides from the secretion of the Red sea mose
marmoratus).";
J. Biol. Chem. 261:16704-16713(1986).
-i- FUNCTION: EXHIBITS UNUSUAL SHARK REPELLENT AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pardachirus marmoratus (Red sea moses sole)
Eukaryota; Metazoa; Chordata; Cranseta; Vertebrata; I
Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Pleurone
Soleoidei; Soleidae; Pardachirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30-MAY-2000
30-MAY-2000
01-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PAP2_PARMA
P81864;
                                                                                                                                                                         Escherichia coli.
Plasmid IncFII R100.
Bacteria; Proteobacteria;
 the
           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE-87057369; PubMed-3782138;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE.
                                                                                                                                                                 Escherichia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PARDAXIN II
                                                                                                                                                                                                                     TRAM PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SSUE=SKIN SECRETION;
                                                                                                                                                                                                                                                                                                                                                    N
                                  SIMILARITY: TO TRAM PROTEIN OF OTHER PLASMIDS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROPERTIES. FORMS VOLTAGE-DEPENDENT, ION-PERI
IN MEMBRANES. AT HIGH CONCENTRATION CAUSES CI
SUBUNIT: MONOMER. IN AQUEDOUS SOLUTION EXISTS
SUBCELLULAR LOCATION: SECRETED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             SUBCELLULAR SIMILARITY:
 European
                                                                                                                                                                                                                                                                                                                               GFF
                                                                                                                                                                                                                                                                                                                                                    GDF
                                                                                                                                                                                                                                                                                                                                                                        Similarity
2; Conser
                                                                                                                                                                                                                                                                                                                                ω
                                                                                                                                                                                                                                                                                                                                                    4
                                                                                                                                                                                                                                                                                                                                                                                                                               Ç
                                                                                                                                                                                                                    (Rel. 13, Cre
(Rel. 13, Las
(Rel. 37, Las
N (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (Rel.
(Rel.
(Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (PXII)
                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                             A;
                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            BELONGS TO THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         39,
40,
                                                                                                                                                                                                                                                                                                                                                                                                                               614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (FRAGMENT)
                                                                                                                                                                                                                                                                                                                                                                                   33.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                               WW;
                                                                                                                                                                                                                                Last sequence up
                                                                                                                                                                                                                                                    Created)
                                                                                                                                                                          gamma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sequence up
annotation
                                                                                                                                                                                                                                                                                                                                                                                                                               7769C9C9C8100000 CRC64
                                                                                                                                                                                                                                          sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sea moses
                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                  Score 9;
Pred. No.
                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             PARDAXIN FAMILY
                                                                                                                                                                          subdivision;
                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           on update)
                                                                                                                                                                                                                                          update)
                                                                                                                                                                                                                                update)
                                                              S INVOLVED
                                                                                                                                                                                                                                                                                                                                                                                   DB 1; L
8.9e+04;
                                                                                                                                                                                                                                                                           Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      , ION-PERMEABLE CHANNELS
CAUSES CELL MEMBRANE LYSI
N EXISTS AS A TETTON
                                                                                                         the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
                                                                                                        products
                                                                                                                                                                          Enterobacteriaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pleuronecti
 are
                                                                                                                                                                                                                                                                                                                                                                         <u>;</u>
                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   moses
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            hydrophobic
                                                           OF
          and
ö
                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                               PLASMID
          the
                                                                         THE CONJUGATION
                                                                                                         from
                                                                                                                                                                                                                                                                                                                                                                                              ū
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sole
 restrictions
                                                                                                         the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (Pardachirus
                                                                DNA
                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LYSIS.
                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                         0
```

FMRFAMIDE (PEL

medicinalis

```
RESULT
FMRF_MF
ID FN
AC PC
DT 21
DT 15
DT 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                THE RESULT TO THE PROPERTY OF 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             use by non-profit modified and this sta entitles requires a l or send an email to l
                                                                                        FMRF_MACNI
P01162;
21-JUL-1986
21-JUL-1986
15-JUL-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FLRF_HIRME
P42561;
01-NOV-1995
01-NOV-1995
01-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Neuropeptide;
MOD_RES
SEQUENCE 4 A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SPECIES-H.MEDICINALIS;
MEDLINS-92195954; PubMed-1686933;
Evans B.D., Pohl J., Kartsonis M.A., Cala
"Identification of Rfamide neuropeptides
Peptides 12:897-908(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HIRME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; M20941; -; NOT_ANNOTATED_CDS
PIR; A32014; A32014
Conjugation; Plasmid; DNA-binding,
NON_TER 1
                                                                                                                                                                                                                                                     MACNI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SPECIES-H.TRIVOLVIS; TISSUE-KIDNEY;
MEDLINE-94286417; PubMed-7912428;
Madrid K.P., Price D.A., Greenberg
"FMRFamide-related peptides from th
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hirudo medicinalis (Medicinal leech), and Helisoma trivolvis (Snail).
Eukaryota; Metazoa; Annelida; Clitellata; Hirudinida; Hirudinea;
Arynchobdellida; Hirudiniformes; Hirudinidae; Hirudo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Peptides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FLRFAMIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 RGD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIMILARITY: 'BELONGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              XXI.
                                                                                                                                                                                                                                                                                                                                                                                                                                   F۷
                                                                                                                                                                                                                                                                                                                                                                       품..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                   ű
                                                                                                                                                                                                                                                                                                                                                                       N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
1; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15:31-36(1994)
86 (Rel. 01, Created)
86 (Rel. 01, Last sequence update)
86 (Rel. 36, Last annotation update)
98 (Rel. 36, Last annotation update)
(PEAK C) (CARDIOEXCITATORY NEUROPEPTIDE).
1sta nimbosa (Sun-ray clam), Nereis virens (Sandworm),
1sta nimbosa (Sun-ray clam), and Helisoma trivolvis (Snail).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   σ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (Rel.
(Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Amidation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                      STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          s statement is not remov
s a license agreement (S
to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NOT_ANNOTATED_CDS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   634 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            institutions as long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 50
50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              . 9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ō
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Greenberg M
des from the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AMIDATION.
69D40729A0000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6B1B1AA443500000 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 8; DB 1
Pred. Nc. 8.9e
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 7; DB 1
Pred. No. 8.9e
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FARP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (FMRFAMIDE RELATED PEPTIDE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .J., Kha
kidney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Calabrese I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (See
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Khan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ļ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            as its content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CRC64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R.L.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                medicinal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Saleuddin A.S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                leech.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ç,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

```
GRWM_HUMAN
ID GRWM_H
AC PO1157
DT 21-JUL
DT 21-JUL
DT 21-JUL
DE GROWTH
OS HOMO S
OC Eukary
OC Mammal
RN [1]
RP SEQUEN
                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STAD BCCCCCCTTTB XCC BRITT XCC BRITT
                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                    RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
Matches 1
                                                                                                            21-JUL-1986 (Rel. C
21-JUL-1986 (Rel. C
21-JUL-1986 (Rel. C
GROWTH-MODULATING F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Neuropeptide;
MOD_RES
SEQUENCE 4 A
                                                                                                                                                                          P01157;
21-JUL-1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SPECIES-H.MEDICINALIS;

MEDLINE-92195954; PubMed-1686933;

Evans B.D., Pohl J., Kartsonis M.A., Calabrese R.L.;

"Identification of RPamide neuropeptides in the medicinal leech.";

Peptides 12:897-908(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PIR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Peptides 15:31-36(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SPECIES-H TRIVOLVIS; TISSUE-KIDNEY;
MEDLINE-94286417; PubMed-7912428;
Madrid K.P., Price D.A., Greenberg
"FMRFamide_related peptides from th
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Price D.A., Greenberg M.J.;
"purification and characterization of from the central gangila of a bivalve Prep. Biochem. 7:261-281(1977).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Price D.A., Greenberg M.J.; "Structure of a molluscan cardioexcitatory Science 197:670-671(1977).
                                              Mammalia;
                                                                  Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-90259866; PubMed-
Krajniak K.G., Price D.A.
"Authentic FMRFamide is poperatides in 1.75-77(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SPECIES=N.VIRENS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE-77215956; PubMed-877582;
    SEQUENCE
                                                                                         Homo sapiens (Human)
                                                                                                                                                                                                                        GRWM_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=78012038; PubMed=909875;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /eneroidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACTIVITIES INCLUDE AUGMENTATION, CARDIAC CONTRACTION.
SIMILARITY: BELONGS TO THE FARP FAMILY.
                                                                                                                                                                                                                                                                                                                                                                             F۷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A60418;
                                                                                                                                                                                                                                                                                                                                    按 --
                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
1; Conserv
                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AND CHARACTERIZATION.
NIMBOSA; TISSUE-GANGLICN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AND
                                              ; Metazoa; Chordata;
Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Metazoa; Mollusca; Bivalvia; Heteroconchia; Veneroida;
; Veneridae; Macrocallista.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ECNK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A60418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Amidation.
                                                                                                                                                                                                                        STANDARD;
                                                                                            01, Created)
01, Last sequence update)
01, Last annotation update)
PEPTIDE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PubMed=2342992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE-CEREBRAL
                                                                                                                                                                                                                                                                                                                                                                                                                                         25.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  present in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Greenberg M. des from the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AMIDATION.
69D40699A0000000 CRC64
                                                                                                                                                                                                                                                                                                                                                                                                                       Score 7; DB 1
Pred. No. 8.96
1; Mismatches
                                           Craniata; Vertebrata; | Catarrhini; Hominidae;
                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the polychaete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PEDAL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (FMRFAMIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .J., Khan H.R., kidney of the s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATORY SUBSTANCE.
                                                                                                                                                                                                                                                                                                                                                                                                                DB 1;

0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a cardioexcitatory
mollusc.";
                                                                                                                                                                                                                        ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VISCERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RELATED PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nereis virens.";
                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     snail, Helisoma
                                                                  Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REGULARIZATION O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GANGLION;
                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

ACH1_

ACHFU ACH1_ACHFU

STANDARD;

PRT

Å

RESULT

```
LUXE_VIBFI
ID LUXE_VIBFI
ID LUXE_VIBFI
AC P24272;
DT 01-MAR-1992
DT 01-MAR-1992
DT 01-MCT-1996
DE LONG-CHAIN-P;
DE MACTINE-P;
DE SEQUENCE FRO
RN HILLINE-P;
DE SEQUENCE FRO
RN MEDLINE-P;
DE STATION
CC -1- FUNCTION
CC -1- CATALYTIC
CC -
  밁
                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SACCEMBR
                                                                              Query Match
Best Local S
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Ma
Best Loc
Matches
                                                                                                                                                                               Luminescence;
NON_TER
SEQUENCE 3 A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed entitles requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-MAR-1992 (Rel. 21, Created)
01-MAR-1992 (Rel. 21, Last sequence update)
01-CCT-1996 (Rel. 34, Last annotation update)
LONG-CHAIN-FATTY-ACID--LUCIFERIN-COMPONENT LIGASE
                                                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produ between the Swiss Institute of Bioinformatics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Swartzman E., Kapoor S., Graham
"A new Vibrio fischeri lux gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PIR; A01421; GKHU.
SEQUENCE 3 AA;
                                                                                                                                                                                                                                              EMBL; M62812;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Vibrio fischeri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=77162369; PubMed=858356;
Schlesinger D.H., Pickart L., Th
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (ACYL-PROTEIN SYNTHETASE) (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    te for the lux operon.";
Bacteriol. 172:5797-6802(1990).

Bacteriol. 172:5797-6802(1990).

FUNCTION. ACXL-PROTEIN SYNTHETASE ACTIVATES TETRADECANOIC ACID.

IT IS A COMPONENT OF THE FATTY ACID REDUCTASE COMPLEX RESPONSIBLE
FOR CONVERTING TETRADECANOIC ACID TO THE ALDEHYDE WHICH SERVES AS
SUBSTRATE IN THE LUCIFERASE-CATALYZED REACTION.

CATALYTIC ACTIVITY: ATP + AN ACID + PROTEIN = AMP + PYROPHOSPHATE
+ AN ACYL-PROTEIN THIOLESTER.
  ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Match
                                        ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N
ט
                                        U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ရ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     G
  ω
                                        ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ц
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N
                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Proteobacteria;
                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SECOND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N.A.
                                                                                                                                                                                                                    Ligase.
                                                                                                                                                                                                                                            -: NOT_ANNOTATED_CDS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PubMed-2254256;
                                                                                                                                                                                 374 MW;
                                                                       22.2%; but
100.0%; Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IN THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gamma subdivision;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6331E81000000000 CRC64;
                                                                                                                                                                                 6AA3303000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0:
                                                                                                 Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  precedes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BIOLUMINESCENT FATTY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ;
;
                                                                                    4 6;
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Meighen E.A.;
les a bidirectional termination
                                                                                                                                                                                                                                                                                                     (See http://www.isb-sib.
                                                                                              . BB
                                                                                                                                                                                                                                                                                                                                                                                                      is produced through
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
BG
                                                                     3 1;
8.9e+04;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3 1;
8.9e+04;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₿
                                                                                                                                                                                                                                                                                                                                           ere are no rest
as its content
                                                                                                                                                                                   CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Vibrionaceae; Vibrio.
                                                                                                                 Length 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                     and the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (E)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                Indels
                                                                                                                                                                                                                                                                                                                            ьy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6.2.1.19)
                                                                                                                                                                                                                                                                                                                                                                                       EMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IN VITRO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REDUCTASE
                                                                                                                                                                                                                                                                                                                                                                                         a collaboration -
MBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STIMULATE
                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                              for
                                                                                                                                                                                                                                                                                                       .ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                     outstation
                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                              commercia.
                                                                                                                                                                                                                                                                                                                                               90
                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

```
DCML_PSEM
ID DCML_P
ID DCML_P
ID DCML_P
ID O1-FEB
DT 01-FEB
DT 01-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOT WE COCCORD TO A REPORT OF A REAL PROPERTY OF A 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-JUN-1994
01-JUN-1994
15-JUL-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (2)
CHARACTERIZATION.
STRAIN-FERUSSAC; TISSUE-HEART ATRIUM;
STRAIN-FERUSSAC; PUDMed-1675568;
Vaccida-Kamate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hormone;
MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kraut M., Hugendieck I., Herwig S., Meyer O.; "Homology and distribution of CO dehydrogenase carboxydotrophic bacteria."; Arch. Microbiol. 152:335-341(1989).
                                                                                                                                                                                                                                                                                                      01-FEB-1991 (Rel. 17, Created)
01-FEB-1991 (Rel. 17, Last sequence update)
01-DEC-1992 (Rel. 24, Last annotation update)
CARBON MONOXIDE DEHYDROGENASE LARGE CHAIN (EC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PIR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fujimoto K., Kubota I., Yasuda-Kamatani Y., Minakata Yoshida M., Harada A., Nuneoka Y., Kobayashi M.; ", "Purification of achatin-I from the atria of the Afri Achatina fulica, and its possible function."; histochem. Biophys. Res. Commun. 177:847-853(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Kamatani Y., Minakata H., Kenny P.T.M., Iwashita T., Wa
Funase K., Sun X.P., Yongsiri A., Kim K.H., Novales-Li
Novales E.T., Kanapi C.G., Takeuchi H., Nomoto K.;
"Achatin-I, an endogenous neurcexcitatory tetrapeptide
fulica Ferussac containing a D-amino acid residue.";
Biochem. Biophys. Res. Commun. 160:1015-1020(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN-FERUSSAC; TISSUE-GANGLION; MEDLINE-89273551; PubMed-2597281;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Achatina fulica (Giant
Eukaryota; Metazoa; Mol
                                                                                                                                                       MEDLINE=90055678; PubMed=2818128;
                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                Pseudomonas carboxydohydrogena.
Bacteria; Proteobacteria.
                                                                                                                                                                                                                                                                                                                                                                                                                                     DCML_PSECH P19916;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE-93014529; Pulshida T., In Y., Dollwashita T., Nomoto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        X-RAY CRYSTALLOGRAPHY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE, CHARACTERIZATION,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Achatinacea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACHATIN-I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Crystal structure and molecular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
mes 1; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N
      CATALYTIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NEURON (PON); ALSO EN
HEART BEAT. HAS ALSO
A32480; A32480.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>ه</u> .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ŋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            D-amino acid.
2 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (Rel.
(Rel.
(Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Achatinidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PubMed=1399265;
rubMed=1399265;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          36,
36,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              t African snail).
ollusca; Gastropod
dae; Achatina.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Created)
Last sequence up
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          D-PHENYLALANINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 6; DB 1; Pred. No. 8.9
   H(2)O + ACCEPTOR -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gastropoda;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SYNTHESIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   conformation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       . update)
.on update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Yasuda-Kamatani Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 1; LC.,
NO. 8.9e+04;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mation of acha
neuropeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pulmonata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CRC64;
                                                                                                                                                                                                                                                                                                            1.2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 4;
                                                                                              structural
   CO(2) +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             African
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   achatin-I
                                                                                                                                                                                                                                                                                                               .99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Η.,
                                                                                                                                                                                                                                                                                                            .
2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Watanabe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Stylommatophora
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Minakata
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             giant snail.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nomoto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EXCITATORY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ×.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ×.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ξ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

В 8

J.,

Calabrese

```
RESULT 11
EOSI_HUMAN
ID EOSI_HUM
AC P02731;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE COCCURATE STRUCTURE OF S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SSSSSES
        RRR COCOTTO
                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                           Ş,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 1
                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 1
                                                                                                                                         _HIRME FAR3_HIRME STANDARD; PRT; 4 AA P42562; 01-NOV-1995 (Rel. 32, Created) 01-NOV-1995 (Rel. 32, Last sequence update) 01-NOV-1995 (Rel. 32, Last annotation updat FMRFAMIDE-LIKE NEUROPETIDE YLRF-AMIDE.
SEQUENCE.
MEDLINE=92195954;
Evans B.D., Pohl
                                                                            Hirudo medicinalis (Medicinal leech).
Eukaryota; Metazoa; Annelida; Clitellata; Hiru
Arvnchobdellida; Hirudiniformes; Hirudinidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PIR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       numan lung tissue:
anaphylaxis.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21-JUL-1986 (Rel. 01, Creat
21-JUL-1986 (Rel. 01, Last
21-JUL-1986 (Rel. 01, Last
EOSINOPHILOTACTIC PEPTIDES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Oxidoreductase; NON_TER 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PIR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ++
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Goetzl E.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=76078412; PubMed=1060093;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ното
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               oetzl E.J., Austen K.F.;
Purification and synthesis of eoung tissue: identification
                                                                                                                                                                                                                                                                                                                                         N
                                                                                                                                                                                                                                                                                                                                                                             N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCEPTOR.
COFACTOR:
SUBUNIT: C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C. Natl. Acad. Sci. U.S.A. 72:4123-4127(1975).

MISCELLANEOUS: THESE PEPTIDES ARE RELEASED FROM MAST CELLS
(AND OTHER TISSUES) DURING HYPERSENSITIVITY REACTIONS
(ANAPHYLAXIS). THEIR ACTIVITIES, PREFERENTIALLY AFFECTING
EOSINOPHILS, INCLUDE CHEMOTAXIS, CHEMOTACTIC DEACTIVATION,
OF ENZYMES, AND STIMULATION OF THE HEXOSE MONOPHOSPHATE SH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sapiens (Human).
.ryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
.alia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SMALL
                                                                                                                                                                                                                                                                                                                                                                             Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . က
                                                                                                                                                                                                                                                                                                                                         മ -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PL0140;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A03190;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HUMAN
                                                                                                                                                                                                                                                                                                                                                                             N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N
                                                                                                                                                                                                                                                                                                                                         N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4
                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ΑA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ETHUL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PL0140.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CONSISTS OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Molybdenum
PubMed=1686933;
T Kartsonis M.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  441 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                    22.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 THREE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               V -> A (IN OTHER PEPTIDE)
/FTId=VAR_005201.
6B05B862A0000000 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7761E876F0000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               of eosinophilotactic cation as eosinophil c
                                                                                                                                                                                                                                                                                                                                                                                                                  Score 6; DB 1
Pred. No. 8.9
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 POLYPEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          e 6;
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             update)
(on update)
                                                                                                                                                             update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 1; Length.
5. 8.9e+04;
ches 0; Ind
                                                                                                                                                                                                                                                                                                                                                                                                            8.9e+04;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A
                                                                                                                                                                                                                                          A
                                                                                                       Hirudinida;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CHAINS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CRC64;
                                                                                    Hirudo
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 c tetrapeptides
chemotactic fac
                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LARGE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4;
                                                                                                         Hirudinea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CELLS
                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RELEASE
                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LUNG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   of.
                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

W.

```
RESULT
FAR4_HI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SERCCERT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SO CCC REPRENCE CONTRACTOR OF THE CCC REPRENCE CONTRACTOR OF T
    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
Matches 1; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE.
SEQUENCE.
MEDLINE=92195954; P
                                                                                                                                                                                                                                                                                                       30-MAY-2000 (Rel. 3
30-MAY-2000 (Rel. 3
30-MAY-2000 (Rel. 3
CARCINUSTATIN 14.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FAR4_HIRME STAN
P42563;
01-NOV-1995 (Rel. 3
01-NOV-1995 (Rel. 3
01-NOV-1995 (Rel. 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          _HIRME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOD_RES
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                             CARMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Neuropeptide; Amidation.
MOD_RES 4 4
SEQUENCE 4 AA; 616 MW
                      "Isolation and identification of multiple allatostatin superfamily in the shore crake Eur. J. Biochem. 250:727-734(1997).
                                                                                                      TISSUE-CEREBRAL GANGLION, AND THORACIC MEDLINE-98121193; PubMed-9461295; Duve H., Johnsen A.H., Maestro J.-L.,
                                                                                                                                                                                                                 Carcinus maenas (Common shore crab) (Green crab).
Eukaryota; Metazoa; Arthropoda; Crustacea; Malacostraca;
Eumalacostraca; Eucarida; Decapoda; Pleocyemata; Brachyu
Eubrachyura; Portunoidea; Portunidae; Carcinus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDIINE=92195954; PubMed=1586933;
Evans B.D., Pohl J., Kartsonis M.A.,
"Identification of RFamide neuropept:
Peptides 12:897-908(1991).
-!- SIMILARITY: BELONGS TO THE FARP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hirudo medicinalis (Medicinal leech).
Eukaryota; Metazoa; Annelida; Clitellata; Hir
Arynchobdellida; Hirudiniformes; Hirudinidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-NOV-1995 (Rel. 32, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
01-NOV-1995 (Rel. 32, Last annotation update)
EMRFAMIDE-LIKE NEUROPERTIDE YMRF-AMIDE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Identification of RFamide
Peptides 12:897-908(1991).
-!- SIMILARITY: BELONGS TO
FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                AL14_CA
P81817;
                                                                                        Thorpe A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Neuropeptide; Amidation.
                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4 F 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4 F 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FAMILY
    FUNCTION: MAY
                                                                                                                                                                                                                                                                                                                                                                                                                    _CARMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AA;
                                                                                                                                                                                                                                                                                                                                                                                                                    STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STANDARD;
                                                                                                                                                                                                                                                                                                                            39, Created)
39, Last sequ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              616 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Æ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           onis M.A., Calabrese R.L.; neuropeptides in the medicinal leech.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 THE
  NEUROTRANSMITTER
                                                                                                                                                                                                                                                                                                                         sequence update) annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AMIDATION.
69D4068B30000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     THE FARP (FMRFAMIDE RELATED PEPTIDE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AMIDATION.
69D4073B30000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          neuropeptides in the medicinal leech.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 6; DB 1
Pred. No. 8.9
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 6;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FARP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 NO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (FMRFAMIDE
                                        crab
                                                                                                        Scott A.G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . DB
                                                                                                                                                 GANGLION;
                                                                                                                                                                                                                                                                                                                                                                                                                    G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ጅ
                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1;
.9e+0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1; Le .9e+04;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hirudinida;
dae; Hirudo.
                                      neuropeptides of b Carcinus maenas.
OR NEUROMODULATOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CRC64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CRC64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RELATED PEPTIDE)
                                                                                                                                                                                                                                       Brachyura;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                           maenas.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hirudinea;
                                                                                                      P.P.,
                                        the .";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

밁

Þ

Search

completed: March

'n

2001, 09:48:22

```
RESULT 15
BIOA_CITFR
                                                                                                   SEES
                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 1
                                                     Query Match
Best Local
                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BIOA_CITFR
P13071;
01-JAN-1990 (
01-JAN-1990 (
01-DEC-1992 (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Neuropeptide;
MOD_RES
SEQUENCE 5 A
                                                                                                                                                                                                                                                                                                                                                                        Liquiscriptional regulation and gene arrangement of Escherichia Citrobacter freundii and Salmonella typhimurium biotin operons. Gene 67:203-211(1988).
                                                                                                                                                                                         entities
or send a
                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-JAN-1990 (Rel. 13, Last sequence update)
01-DEC-1992 (Rel. 24, Last annotation update)
ADENOSYLMETHION UPDATE AMI
(EC 2.6.1.62) (7,8-DIAMINO-PELARGONIC ACID AM
                                                                                                                                                                                                                                                                                                                      ÷÷
                                                                                                 SEQUENCE
                                                                                                           Pyridoxal phosphate.
                                                                                                                                  Biotin biosynthesis;
                                                                                                                                               PROSITE; PS00600;
                                                                                                                                                                   EMBL; M21922; CAB25179.1;
                                                                                                                                                                                                                                                                                                          <del>:</del>
                                                                                                                                                                                                                                                                                                                                                                                                             Shiuan D., Campbell
                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE-89005280;
                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Citrobacter freundii.
Bacteria; Proteobacteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AMINOTRANSFERASE) (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      **
                                                                                                                                                                                                                                                                                 7,8-DIAMINONONANOATE.

1 COFACTOR: PYRIDOXAL PHOSPHATE.

1 PATHWAY: BIOTIN BIOSYNTHESIS.

1 SUBUNIT: HONODIMER.

1 SIMILARITY: BELONGS TO CLASS-II:

AMINOTRANSFERASES.
                 ω
υ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 F 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ω
                                                                                                                                                                                                                                                                                                                                                       CATALYTIC ACTIVITY: S-ADENOSYL-L-METHIONINE + 8-AMINO-OXONONANOATE = S-ADENOSYL-4-METHYLTHIO-2-OXOBUTANOATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIMILARITY:
ษ -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          raj .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     . Similarity
1; Conserv
                                                                                                                                                                                         non-profit institutions as long d and this statement is not removed. s requires a license agreement (See an email to license@isb-sib.ch).
                                          Similarity 100
1; Conservative
                                                                                                                                                         IPR000954;
                                                                                                   σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AA;
                                                                                                 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                  N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Amidation; Multigene family
5 AMIDATION (P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BELONGS TO THE ALLATOSTATIN FAMILY
                                                                                                                                 AA_TRANSFER_CLASS_3; PARTIAL. is; Transferase; Aminotransferase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              586 MW;
                                                                                                   582
                                                                                                                                                                                                                                                                                                                                                                                                                         PubMed-2971595
                                                                                                                                                                                                                           institutions as long as its content
                                                     22.2%;
                                                                                                              UI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22.2%;
                                                                                                   MY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Created)
                                                                                                                                                                                                                                                                                              TO CLASS-III OF PYRIDOXAL-PHOSPHATE-DEPENDENT
                                                      .0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gamma subdivision;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AMIDATION (POTE 672879D5AB300000
                                                                                                 5AAAB1B1A6F00000 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 6; Pred. No.
                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                     Score 6;
Pred. No.
                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                (See http://www.isb-sib.
                                                     . DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Çī
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .
80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (POTENTIAL)
                                                     1; Le .9e+04;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1; Le .9e+04;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AMINOTRANSFERASE)
                                                                                                                                                                                                              Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Enterobacteriaceae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                               Length
                                                                                                                                                                                                                                                                                                                                                                  + 8-AMINO-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                          Indels
                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0,
                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (DAPA
                                                                                                                                                                                                                                                                                                                                                                                                   coli,
                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

Job time: 180 sec

```
RESULT
P82070
ID P8
AC P8
DT 01
DT 01
                                                                                                                                                                                              Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                           Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Post-processing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Minimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Total number of hits satisfying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9n.:
P82070;
01-MAY-2000 (TrEMBLrel.
01-MAY-2000 (TrEMBLrel.
                                                                                                                                                                                                                                             pred. No. is th
score greater t
and is derived 
                             P82070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB DB
                                                                                                                                                                                               Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  seq
seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein search,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   length: 0 length: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Minimum 1
                                                                                                                                                                                                                                            is the number of results predicted by chance to have a ster than or equal to the score of the result being printed, ived by analysis of the total score distribution.
                                                                                                                                                                                               Match
                                                                                                                                                                                                        Query
                                                                                                                                                                                                                                                                                               12:
                                                                                                            44.4
37:0
33.3
33.3
29.6
29.6
14.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BLOSUM62
Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            March
                                                                                                                                                                                                                                                                                                                                                                                                                         SPTREMBL_15:*
                                                                                                                                                                                                                                                                                                                                                                                                                                             Listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  374700 seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-081-522-5
27
                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RGDFV 5
                                                                                                                                                                                                                                                                                   sp_rodent:*
sp_virus:*
sp_vertebrate:*
sp_unclassified:*
                                                                                                                                                                                                                                                                                                                                                                                                      sp_archea:*
sp_bacteria:*
                                                                                                                                                                                                                                                                                                                                   sp_phage: *
                                                                                                                                                                                                                                                                                                                                              sp_organelle:*
                                                                                                                                                                                                                                                                                                                        sp_plant:*
                                                                                                                                                                                                                                                                                                                                                                           p_invertebrate:*
                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                  mammal:*
                                                                                                                                                                                                                                                                                                                                                                                    numan:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6,
                                                                                                                                                                                                                                                                                                                                                                                              fungi:+
                                                                                                                                                                                                                                                                                                                                                                                                                                            Match 0%
Match 100%
first 45 summaries
                                                                                                           \sigma = \sigma \sigma \sigma \sigma \sigma \sigma \sigma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2001, 09:44:54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GenCore
(c) 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              using sw model
 13,
                                                                                                                                                                                               멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   117207915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gapext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               chosen parameters:
 Created)
Last sequence update)
                                                                                                                                                                                              H
                                                                                                                                    P82070
PE2099
P82073
P82100
P82071
                                                                                                                             P82072
                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             version - 2000
                                                                              ALIGNMENTS
                                                                                                                                                                                                                           SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Search time 32.72 Seconds (without alignments) 17.911 Million cell updates/sec
                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4.5
                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              . T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                œ
                                                                                                                                              P82070
P82099
P82073
P82100
                                                                                                                                                                                              Description
                                                                                                                          0 litoria rub
9 litoria rub
3 litoria rub
0 litoria rub
1 litoria rub
                                                                                                        rattus n
                                                                                                         m vul
```

```
RESULT
P82073
                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT
P82099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                    Š
                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
    BAB
                                                                                                                            Query Match
Best Locai S
Matches 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 2
                                                                                                                                                                                                                                                                                                                                                                                  P82099;
P82099;
01-MAY-2000
01-MAY-2000
P82073 PRELIMINARY;
P82073;
01-MAY-2000 (TrEMBLrel. 13,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE, AND MASS SPECTROMETRY.

TISSUB-SKIN SECRETION;

Steinborner S.T., Wabnitz P.A., Waugh R.J., Bowie J.H., Gao C.,

Tyler M.J., Wallace J.C.;

Tyler M.J., Wallace J.C.;

The structure of new peptides from the Australin red tree frog

'Litoria rubella', the skin peptide profile as a probe for the study

of evolutionary trends of amphibians.";

Aust. J. Chem. 49:955-963(1996).

-I- TISSUB SPECIFICITY: SECRETED BY THE SKIN DORSAL GLANDS.
                                                                                                                                                                                                                                           Wabnitz P.A., Bowie J.H., Tyler M.J., "Peptides from the skin glands of the Litori electrica. Comparison with the
                                                                                                                                                                                                                                                                                                                                   Litoria rubella (Desert tree frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Neobatrachia; Bufonoidea; Hylidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Litoria rubella (Desert tree frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Neobatrachia; Bufonoidea; Hylidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-MAY-2000 (TrEMBLrel. RUBELLIDIN 1.1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Amphibian skin.
SEQUENCE 5 AA;
                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                              TISSUE-SKIN SECRETION;
                                                                                                                                                                                                                                                                                                                NCBI_TaxID=104895;
                                                                                                                                                                                                Amphibian skin;
MOD_RES 5
                                                                                                                                                                                                                        Aust.
                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID-104895;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -1- MASS SPECTROMETRY: MW-598;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N
                                              w
                                                                                                                                                                                                                                                                                                                                                                                                                                                         N
                                                                                 _ pg
___4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          H.
                                                                                                                            . Similarity 2; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity 2; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          w
                                                                                                                                                                                                                     Chem. 52:0-0(1999).
                                                                                                                                                                                    5 AA;
                                                                                                                                                                                                                                                                                                                                                                                  (TrEMBirel. 13, Created)
(TremBirel. 13, Last seq
(TremBirel. 13, Last ann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                               ; Amidation.
5
                                                                                                                                                                                   5 AMIDATION:
630 MW; 668761F2C9A00000 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               598 MW;
                                                                                                                        37.0%; 5-
100.0%; Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6DD9C9CAB2A00000 CRC64
   Created
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                            score 10; DB; Pred. No. 3.7
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                   Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 12; DB; Pred. No. 3.7
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     METHOD-FAB.
                                                                                                                                                                                                                                           Wallace J.C.;
Australian buzzing
skin peptides from
                         s
                                                                                                                                       DB 13;
3.7e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 13;
3.7e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                   À
                         B
                                                                                                                                                  Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                              Indels
                                                                                                                                                                                                                                            tree frog
                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
```

0;

```
PARE
                                                                                           S
                                                                                                                                                              P8207
                                                RESULT
                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                             멍
                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                               Query Match
Best Local S
Matches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
P82071;
P82071;
01-MAY-2000
                                                                                                                                                            Amphibian skin;
MOD_RES 5
SEQUENCE 5 AA;
                                                                                                                                                                                                                                                                                                               01-MAY-2000
01-MAY-2000
01-MAY-2000
ELECTRIN 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE.
SISSUE-SKIN SECRETION;
Wabnitz P.A., Bowie J.H., Tyler M.J.,
Wabnitz P.A., Bowie J.H., Tyler M.J.,
Peptides from the skin glands of the
"Peptides from the skin glands of the
                                                                                                                                                                                                    SEQUENCE:
SECRETION;
TISSUE-SKIN SECRETION;
Wabnitz P.A., Bowie J.H., Tyler M.J., Wallace J.C.;
"Peptides from the skin glands of the Australian buz"
"Peptides from the skin glands of the Skin peptides
                                                                                                                                                                                                                                                                                    Litoria rubella (Desert tree frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Necbatrachia; Bufonoidea; Hylidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Aust. J. Chem. 52:0-0(1999).

-i- PUNCTION: CARRIDINS SHOW NEITHER ANTIBIOTIC ACTIVITY.

-i- TISSUE SPECIFICITY: SECRETED BY Amphiblan skin.

SEQUENCE '5 AA; 570 MW; 71A9C9C86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Litoria rubella (Desert tree
Eukaryota; Metazoa; Chordata;
Amphibia; Batrachia; Anura; N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-MAY-2000
01-MAY-2000
                                                                                                                                                                                         rubella.";
Aust. J. Chem. 52:0-0(1999).
                                                                                                                                                                                                                                                                                                                                                                P82100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rubella."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID-104895;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Litoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RUBELLIDIN
                                                                                                                                                                                                                                                                   NCBI_TaxID=104895;
                                                                                                             Local Similarity nes 1; Conserv
                                                                                       4 FV 5
                                                                           _
                                                                                                                                                                                                                                                                                                                                                                                                              N
                                                                                                                                                                                                                                                                                                                                                                                                                               N
                                               G
                                                                                                                                                                                                                                                                                                                                                                                4
                                                                           3.
                                                                                                                                                                                                                                                                                                                                                                                                              GFF
                                                                                                                                                                                                                                                                                                                                                                                                                               GDF
                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
2; Conserv
                                                                           N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ω
                                                                                                                                                                                                                                                                                                                        ) (TrEMBLrel.) (TrEMBLrel.)
(TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (TrEMBLrel. 13,
                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                              Ą
                                                                                                                                                                        Amidation.
                                                                                                                                                              616 MW;
                                                                                                                        33.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          33.3%;
13,
13,
                                                                                                                                                                                                                                                                                                                         13,
                                                                                                                                                             AMIDATION.
61F2D1A059A00000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                71A9C9C862A00000 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Last
Last
                                                                                                              Score 9; DB 1
Pred. No. 3.7e
1; Mismatches
                                                                                                                                                                                                                                                                                                                                             Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Neobatrachia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               frog).
Created)
Last sequence update)
                                                                                                                                                                                                                                                                                                                        Last sequence up
                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 9;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NEITHER
                             PRT;
                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sequence update;
annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NEUROPEPTIDE ACTIVITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Wallace J.C.;
Australian buzzing
skin peptides from
                                                                                                                          DB 13;
3.7e+0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SKIN DORSAL GLANDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Vertebrata; Euteleostomi;
a; Bufonoidea; Hylidae;
                                                                                                             3 ls,
3.7e+05;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           .7e+05;
                            A
                                                                                                                                                                                                                                                                                                                                                                æ
                                                                                                                                                                                                                                                                                                                                   update)
                                                                                                                                                              CRC64;
                                                                                                                                                                                                                                                                                                                        update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            update)
                                                                                                                                 Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                     buzzing
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                               Indels
                                                                                                                                                                                                             from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                y tree frog
n Litoria
                                                                                                                                                                                                            tree fro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NOR
                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                      frog
                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                               0;
```

```
PRESOURCE
PRESOU
                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DI DE RESERVA DE LE RESERVA DE
맑
                                                                                                               Query Match
Best Local S
Matches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 1
                                                                                                                                                                                                                                                                                                                                                                                                  TISSUE-SKIN SECRETION;
Steinborner S.T., Wabbitz P.A., Waugh R.J., Bo
Tyler M.J., Wallace J.C.;
"The structure of new peptides from the Austra
'Litoria rubella'. the skin peptide profile as
of evolutionary trends of amphiblans.";
Aust. J. Chem. 49:955-963(1996).
-I- FUNCTION: CAERIDINS SHOW NEITHER NEUROPEPT
ANTIBIOTIC ACTIVITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        P82072;
P82072;
01-MAY-2000
01-MAY-2000
01-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -1- TISSUE SPECIFICITY: SECRETED BY
-1- MASS SPECIFOMETRY: MW-655; METHO
Amphibian skin; Amidation.
MOD_RES 5 AMIDATI
SEQUENCE 5 AA; 656 MW; 71A9C9CB1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE, AND MASS
TISSUE-SKIN SECRETI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Litoria rubella (Desert
Eukaryota; Metazoa; Chor
Amphibia; Batrachia; Anu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE-SKIN SECRETION;
Steinborner S.T., Wabnitz P.A.,
Tyler M.J., Wallace J.C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; (
Amphibia; Batrachia;
Litoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Litoria rubella (Desert tree frog).
Eukaryota; Metazoa; Chordata; Craniata; V.
Amphibia; Batrachia; Anura; Neobatrachia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RUBELLIDIN 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RUBELLIDIN 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-MAY-2000 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=104895;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=104895;
                                                                                                                                          Local Similarity
                                                         w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N
   N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       σ
                              .. ታ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      변..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DF 4
   띩
                                                         ^
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
1; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Skin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AND MASS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (TrEMBLrel.) (TrEMBLrel.) (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      626 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SPECTROMETRY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SPECTROMETRY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chordata;
                                                                                                                                          29.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ert tree frog).
Chordata; Craniata; Vertebrata; Euteleostomi;
Anura; Neobatrachia; Bufonoidea; Hylidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13,
13,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13,
                                                                                                                                                                                                                                                             AMIDATION.
71A9C9CB10300000 CRC64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6DD9C9CB10300000 CRC64;
                                                                                                               Score 8; DB 1
Pred. No. 3.7e
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Last sequence update;
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Created;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                         NEITHER NEUROPEPTIDE ACTIVITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                  METHOD-FAB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Waugh R.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ж°;
                                                                                                                                                                                                                                                                                                                                                                                THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           THE SKIN DORSAL
                                                                                                                                          DB 13;
3.7e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 13;
3.7e+0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Vertebrata; Euteleostomi;
a; Bufonoidea; Hylidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Australin
file as a p
                                                                                                                                                                                                                                                                                                                                                                                SKIN DORSAL GLANDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .7e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bowie J.H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bowie J.H.,
                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           probe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         probe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            red
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         red tree frog
probe for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACTIVITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GLANDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tree frog
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  c.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0.
                                                                                                                  0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              study
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            study
                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

4.5

```
RY SEQUENCE FROM N.A.

REDLINE-91329704; PubMed-1831055;

RX MEDLINE-91329704; PubMed-1831055;

RA Jacobsen J.V., Close T.J.;

RA Jacobsen J.V., Close T.J.;

RT "Control of transient expression of chimaeric genes by gibberellic red acid and abscisic acid in protoplasts prepared from mature barley red aleurone layers.";

RT aleurone layers.";

RT aleurone layers.";

RL plant Mol. Biol. 16:713-721(1991).

Plant Mol. Biol. 16:713-721(1991).

CC -i- CATALYTIC ACTIVITY: ENDOHYDROLYSIS OF 1,4-ALPHA-GLUCOSIDIC CC LINKAGES IN OLIGOSACCHARIDES AND POLYASACCHARIDES.

CC -i- COPACTOR: BINDS A CALCIUM ION REQUIRED FOR ITS ACTIVITY.

CC -i- COPACTOR: BINDS A CALCIUM ION REQUIRED FOR ITS ACTIVITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ROBERTS OF STREET OF STREE
     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 1; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Métazoa; Chordata; Mammalia; Eutheria; Rodentia; NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q08433
Q08433;
Hydrolase; Glycosidase; Ca
Calcium; Multigene family.
                                                                                                                                                                                                                                                                                                                                                                                                                                              Hordeum vulgare (Barley).
Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta;
Magnoliophyta; Liliopsida; Poales; Poaceae; Hordeum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-NOV-1996 (TrEMBLrel. 01, 01-NOV-1996 (TrEMBLrel. 01, 01-NOV-1998 (TrEMBLrel. 08, 01-NOV-1998 (EC 3.2.1.1) (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NON_TER
                                                 EMBL; X54643; CAA38455.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q99007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Transferase; Glycosyltransferase; Microsome; Multigene family
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sato H., Aono S., Kashiwamata S., Koiwai O.; "Genetic defect of bilirubin UDP-glucuronosyltransferase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE-91282758; PubMed-1840486;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-NOV-1996 (TrEMBLrel. 01, 0
01-NOV-1996 (TrEMBLrel. 01, 1
01-JAN-1999 (TrEMBLrel. 09, 1
UDP-GLUCURONOSYLTRANSFERASE,
                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID-4513;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     299007;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FRAGMENT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 V 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5 V 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SUBCELLULAR LOCATION: MICROSOME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S38636; AAB19259.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MW;
                         Carbohydrate metabolism; Seed; Germination;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         633732C420000000 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  s; Fred. No. 3.7
c; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Last sequence update)
Last annotation update)
, MICROSOMAL (EC 2.4.1.17)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Craniata; Vertebrata; | Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 11; Le
5. 3.7e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Euteleostomi;
; Murinae; Rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   UDP + ACCEPIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

```
В
                                                                        δÃ
                                                                                                                                                    SQ
Search completed: March
Job time: 191 sec
                                                                                             Query Match 7.4
Best Local Similarity 0.08
Matches 0; Conservative
                                                                                                                                                   NON_TER
SEQUENCE
                                                                        1 R 1
                                                                                                                                                    u
                                                                                                                                                    AA;
                                                                                                                                                   500 MW;
                                                                                                       7.4%;
          2001, 09:48:05
                                                                                                                                                    61E3344DD6F00000 CRC64;
                                                                                          Score 2; DB 10; Lengtn 5;
Pred. No. 3.7e+05;
Pred. No. 3.7e+05; Indels
                                                                                              0;
                                                                                              Gaps
```

THIS PAGE BLANK (USPTO)

and the second of the second o

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Post-processing: Minimum Match
Maximum Match
Listing first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Minimum DB seq length: 0
Maximum DB seq length: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
          110 98 76 54
                                                                                                                                                                                                                                                                                                              Pred. No. is the number of results predicted by chance to he score greater than or equal to the score of the result being and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                Score
          27
27
27
27
27
27
27
27
27
                                                                                                                                                                                                                              Query
Match
                                                          268
                                                                                                          50
                                                                                                                                            8888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         March 6, 2001, 09:45:52; Search time 30.08 Seconds (without alignments) 5.684 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A_Geneseq_36:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     268485 seqs, 34193795 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            us-09-081-522-7
27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                            SIDS1/gcgdata/geneseq/geneseqp/AA1991.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1992.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1993.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1993.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1995.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1996.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1997.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1999.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1999.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1999.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RGDFV 5
                                                                                                                                                                              . .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /SIDS1/gcgdata/geneseq/geneseqp/AA1980.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1981.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1982.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1983.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1984.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1985.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1985.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1985.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1985.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1985.DAT:*
                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /SIDS1/3c3data/geneseq/geneseqp/AA1989.DAT:*
/SIDS1/3c3data/geneseq/geneseqp/AA1990.DAT:*
          ហេសហហហហហហហហហហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /gcgdata/geneseq/geneseqp/AA1987.DAT:*
/gcgdata/geneseq/geneseqp/AA1988.DAT:*
                                                                                                                                                                                                                                DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100%
100%
t 45 summaries
                                                                                                                                                                                                                                Ħ
                                                                                        R82387
RE2389
W33057
                                                                                                                                          R45382
R45384
R45386
R45387
                                                                                                                                                                                                                                                                                SUMMARIES
Cell adhesion inhi
Cell adhesion inhi
Cell adhesion inhi
Cell adhesion inhi
Cyclic integrin al
Cyclic integrin al
Cyclic integrin al
Alphary, beta-5 vi
Alpha-v, beta-3 ant
Alpha-v beta-3 ant
Alpha-v beta-3 ant
Alpha-v beta-3 ant
Alpha-v beta-5 ant
                                                                                                                                                                                                                          Description
                                                                                                                                                                                                                                                                                                                          to have a being printed,
```

	•		:																													
23	2	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	24	24	27	27	27
85.2	5			5	5	5	ū	ū	5	5		5	5	5	5	51	<u>ب</u>	Ġ	5	5	5	5	Ġ	5	5	۶.	5	œ	œ	8	Ō	00.
σ (
20	9	19	18	18	18	18	8	18	18	8	18	28	18	18	13	12	12	19	19	18	15	15	15	14	14	13	12	20	20	20	19	19
Y43231	124	111	316	315	535	35	535	535	535	535	535	535	805	805	451	176	017	059	209	517	256	980	452	ω	238	531	1040	230	9230	30	24	24
ontaining pe	pha-v-beta-5 an	clíc peptide li	teqrin inhibiti	tegrin inhibiti	clic integrin	clic	clic integrin	clic integrin	lic integrin	clic integrin	clic integrin	clic integri	otin derivativ	iotin derivativ	telet antago	ptide #4 havi	D-contg. peptid	IIb/IIIa recept	rgetting peptid	D-peptide cap	/tetra-cycli	quence of pept	atelet aggre	IIb/IIIa rece	brinogen recept	l contact inh	brinogen recep	clic adhesion i	yclic adhesion	clic azapeptide	Alpha-v-beta-5 ant	pha-v-beta-5 an

ALIGNMENTS

PA	PR PR	y P F	Y P S	N. A.	X E :	1 75 F	FT	FH.	SO.	XX	WX	KW	ΚW	ΚW	XX E	XX	D X	గ్గ	×	7.4.0	RES
(MERE) MERCK PATENT GMBH	06-JUL-1992; 24-FEB-1993;	26-JUN-1993;	. 12-JAN-1994.	EP578083-A.	בייסמדדדים מדרכם	V) 21 51 92 91 1	Modified-site	Kev ·	Synthetic.	wound healing;	osteoporosis; tumour;	apoplexy; arter	animal; somatic	Cyclopentapepti	Cell adhesion i		06-JUL-1994 (f	R45382;	K40302 Standard		RESULT 1
ATENT GMBH.	92US-0909367. 93US-0022024.	93EP-0110232.			/note= "Amide linkage to Argl forming a cyclic peptide"	/note= "D-form residue, Amide linkage to Valb forming a cyclic peptide"		Location/Oualifiers		wound healing; beta-3 integrin; fibrogen binding.	umour; adhesion-receptor antagonist; osteoclast;	<pre>apoplexy; arteriosclerosis; inflammation; angina pectoris;</pre>	animal; somatic; cell; thrombosis; myocardial infarction;	de; cyclohexapeptide; inhibition; adhesion;	Cell adhesion inhibition peptide (m).		(first entry)		Scandard; Frocein; 3 AA.	п	

```
RESULT
R45384
ID R4
Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     animal; somatic; cell; thrombosis; myocardial infarction; apoplexy; arteriosclerosis; inflammation; angina pectoris; osteoporosis; tumour; adhesion-receptor antagonist; osteocomound health bearing the formula the statement of the control of the c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A composition containing these peptides may be used in the treatment and prophylaxis of thrombosis, myocardial infarction, appolexy, arteriosclerosis, inflammation, angina pectoris, osteoporosis and/or tumour. They are used to induce an adhesio receptor antagonist effect in the subject, to inhibit cell adhered in the formation of coronary may also be used in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Compsn. contg. cyclopenta- or hexa-peptide - inhibits adhesion animal cells, used in the treatment and prophylaxis of e.g. thrombosis, tumours, osteoporosis or inflammation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1994-009982/02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hoelzemann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cheresh DA,
Hoelzemann G,
                   Cheresh DA,
                                                                                                                                                                                                                                                                                    EP578083-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cyclopentapeptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cell adhesion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R45384;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R45384 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The sequences given in R45370-87 are cyclopenta- and cyclohexapeptides which act to inhibit adhesion between animal cells
                                                                                                                    06-JUL-1992;
24-FEB-1993;
                                                                                                                                                                                         26-JUN-1993;
                                                                                                                                                                                                                                        12-JAN-1994
                                                                                                                                                                                                                                                                                                                                                            Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                           Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           wound
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    06-JUL-1994
                                                                     (MERE ) MERCK
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             healing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 RGDFV 5
|||||
1 rgdfv 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           in the formation of osteoclasts. The ling compositions and to block beta-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         healing;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Diefenbach
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AA;
Diefenbach B,
Jonczyk A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7;
                                                                       PATENT GMBH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      inhibition peptide (o)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           beta-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Jonczyk
                                                                                                                    92US-0909367
93US-0022024
                                                                                                                                                                                         93EP-0110232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                   /note=
                                                                                                                                                                                                                                                                                                                                                                                  /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                 'note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cyclohexapeptide; inhibition;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       . А,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           integrin; fibrogen
                                                                                                                                                                                                                                                                                                                                                                                  "D-form
                                                                                                                                                                                                                                                                                                                                   "Amide linkage to
                                                                                                                                                                                                                                                                                                                                                                                                                                 "Amide linkage to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  σ
Felding-Habermann
Kessler H, Melzer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Felding-Habermann
Kessler H, Melzer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 27;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                  residue"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ħ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             They may also be used in wound a-3 integrin fibrogen binding.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2.1e+05;
                                                                                                                                                                                                                                                                                                                                   Arg1 forming a cyclic peptide'
                                                                                                                                                                                                                                                                                                                                                                                                                                 Val5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           binding.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ΰä
  ິບ ຕ
                                                                                                                                                                                                                                                                                                                                                                                                                                 forming a cyclic peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gurrath
Mueller
  Gurrath
Mueller
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    osteoclast;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        adhesion-
  ი 🕱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>ი ჯ</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 adhesion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
```

밁 Ş

```
RESULT
R45386
                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Thes 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cheresh DA,
Hoelzemann G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             apoplexy, arterioscierosis, inflammation, angina pectoris, osteoporosis and/or tumour. They are used to induce an adhesion-receptor antagonist effect in the subject, to inhibit cell adhesion, and in the formation of osteoclasts. They may also be used in wound
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Compsn.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI;
                                                                                      06-JUL-1992;
24-FEB-1993;
                                                                                                                                                         EP578083-A.
                                                                                                                                                                                                                                Key
                                                                                                                                                                                                                                                  Synthetic.
                                                                                                                                                                                                                                                                     animal; somatic; ceil; thrombosis; myocardial infarction; apoplexy; arteriosclerosis; inflammation; angina pectoris; osteoporosis; tumour; adhesion: receptor antagonist; osteocwound healing; beta-3 integrin; fibrogen binding.
                                                                                                                                                                                                                                                                                                            Cyclopentapeptice;
                                                                                                                                                                                                                                                                                                                                Cell adhesion inhibition peptide (q).
                                                                                                                                                                                                                                                                                                                                                     06-JUL-1994
                                                                                                                                                                                                                                                                                                                                                                        R45386;
                                                                                                                                                                                                                                                                                                                                                                                           R45386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     healing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A composition containing these peptides may be used in the treatment and prophylaxis of thrombosis, myocardial infarction,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The sequences given
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1; Page 7; 9pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      animal
                                                                                                                    26-JUN-1993;
                                                                                                                                        12-JAN-1994.
                                                                                                                                                                                                  Modified-site
                                                                                                                                                                                                                      Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cyclohexapeptides which act
                                                                  (MERE )
                                                                                                                                                                                                                                                                                                                                                                                                                                            ۴-،
                                                                                                                                                                                                                                                                                                                                                                                                             ω
                                                                                                                                                                                                                                                                                                                                                                                                                                          . RGDFV 5
|||||
| rgdfv 5
                   1994-009982/02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1994-009982/02
                                                                                                                                                                                                                                                                                                                                                                                           standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            contg.
                                                                   MERCK PATENT GMBH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      compositions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   տ
                                      Ġ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tumours,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                              Diefenbach B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ĀĀ;
                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          . cyclopenta- or hexa-peptide -
used in the treatment and propl
umours, osteoporosis or inflamma
                                                                                                                                                                                                /note=
                                                                                      9205-0909367
9305-0022024
                                      Jonezyk
                                                                                                                    93EP-0110232
                                                                                                                                                                                         /note=
                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                           Protein;
                                                                                                                                                                                                                                                                                                            cyclohexapeptide; inhibition; adhesion;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      of osteoclasts. They may als and to block beta-3 integrin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R45370-87 are cyclopenta- and h act to inhibit adhesion between
                                      P,
                                                                                                                                                                             "D-form residue, Amide a cyclic peptide"
                                                                                                                                                                                                           "Amide linkage to
                                       Kessler
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                               Felding-Habermann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           inflammation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 1.,
2.1e+05;
0;
                                       Melzer
                                                                                                                                                                                                            Va15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              inhibits adhesion
                                       óά
                                                                                                                                                                                         linkage
                                                                                                                                                                                                           forming
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                      Gurrath
Mueller
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       fibrogen binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      of
                                                                                                                                                                                                                                                                                osteoclast;
                                                                                                                                                                                         ç
                                                                                                                                                                                                           a cyclic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            animal cells
                                                                                                                                                                                         Argl forming
                                       O 🗷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                            peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

Compsn.

contg.

cyclopenta-

or F

hexa-peptide -

inhibits

adhesion

of

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                      Cyclopentapeptide; cyclohexapeptide; inhibition; adhesion; animal; somatic; cell; thrombosis; myocardial infarction; apoplexy; arteriosclerosis; inflammation; angina pectoris; osteoporosis; tumour; adhesion-receptor antagonist; osteocwound healing; beta-3 integrin; fibrogen binding.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          apoplexy, arterioscierosis, inflammation, angina pectoris, osteoporosis and/or tumour. They are used to induce an adhesion-receptor antagonist effect in the subject, to inhibit cell adhesion, and in the formation of osteoclasts. They may also be used in wound healing compositions and to block beta-3 integrin fibrogen binding.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The sequences given in R45370-87 are cyclopenta- and cells cyclohexapeptides which act to inhibit adhesion between animal cells A composition containing these peptides may be used in the treatment and prophylaxis of thrombosis, myocardial infarction,
       Compsn. contg. cyclopenta- or hexa-peptide - inhibits adhesion animal cells, used in the treatment and prophylaxis of g.g. thrombosis, tumours, osteoporosis or inflammation
                                                                                                                                                                                                                                                                                                                                                Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                             Cell adhesion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  R45387 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       animal cells, used in the treatment and prophylaxis of thrombosis, tumours, osteoporosis or inflammation
                                                                                                                                          06-JUL-1992;
24-FEB-1993;
                                                                                                                                                                                                                                                               Modified-site
                                                                                                                                                                                                                                                                                      Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      06-JUL-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim
                                                                                            Cheresh DA,
                                                                                                                                                                              26-JUN-1993;
                                                                                                                                                                                                      12-JAN-1994
                                                                                                                                                                                                                                                                                                            Modified-site
                                                                                                                  (MERE ) MERCK PATENT GMBH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 RGDFV 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4
                                                         1994-009982/02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            rgdfv 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Page
                                                                               é
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ą,
                                                                                            Diefenbach
                                                                                                                                                                                                                                                                                                                                                                                                                                             inhibition peptide
                                                                                                                                                                                                                                                                                       /note=
                                                                                                                                          920S-0909367
930S-0022024
                                                                                                                                                                              93EP-0110232
                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9pp;
                                                                                                                                                                                                                                                    /note=
                                                                                                                                                                                                                                                                         /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                English
                                                                                                                                                                                                                                                                          "D-form residue"
                                                                                                                                                                                                                                                                                                "Amide linkage to
                                                                                                                                                                                                                                                   "Amide linkage to Argl forming a cyclic peptide"
                                                                                         'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ر.
                                                                              Felding-Habermann
Kessler H, Melzer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 27; DB 15;
Pred. No. 2.1e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                              £.
                                                                                                                                                                                                                                                                                                Val5 forming a cyclic peptide"
                                                                               ďά
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 5;
                                                                              Gurrath
Mueller
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                               ი 🛪
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                 ō,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8x0000000000x8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The sequences given in R45370-87 are cyclopenta- and cyclohexapeptides which act to inhibit adhesion between animal cyclohexapeptides which act to inhibit adhesion between animal R cyclohexapeptides between the composition containing these peptides may be used in the treatment and prophylaxis of thrombosis, myocardial infarction, apoplexy, arteriosclerosis, inflammation, angina pectoris, osteoporosis and/or tumour. They are used to induce an adhesio receptor antagonist effect in the subject, to inhibit cell adheron and in the formation of osteoclasts. They may also be used in and in the formation of osteoclasts.
                         The inhibitor peptides may be administered in a compsn. and are us for inhibition of inflamed tissue angiogenesis, e.g. that associate with rheumatoid:arthritis, retinal angiogenesis associated with diabetic retinopathy, that associated with haemangioma, solid tumours, or solid tumour metastases. The alpha-v-beta-3 atagonists are also useful to induce apoptosis in neovasculature in a tissue. The inhibitor peptides are pref. cyclic and contain an RGD sequence
                                                                                                                                                                                                      Inhibition of angiogenesis in a tissue, e.g. following angioplasty by admin. of a compsn. comprising an alpha-v-beta3 antagonist, useful for regression of established tumours, treating inflamed
                                                                                                               R82386-96 are a group of inhibitor peptides of integrin alpha-v-beta-3. The inhibitor peptides may be administered in a compsn. and are useful
                                                                                                                                                            Claim 4; Page 47; 135pp;
                                                                                                                                                                                                                                                                                              Brooks P,
                                                                                                                                                                                                                                                                                                                                                                                                  09-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO9525543-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Integrin; alpha-v-beta-3;
fibrinogen; inflammation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cyclic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         03-MAY-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R82387;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R82387 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1;
Sequence
                                                                                                                                                                                                                                                                 WPI; 1995-344463/44.
                                                                                                                                                                                                                                                                                                                         (SCRI ) SCRIPPS RES INST
                                                                                                                                                                                                                                                                                                                                                      30-DEC-1994;
18-MAR-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                               28-SEP-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     healing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 RGDFV 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rgdfv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              integrin alpha-v-beta-3 inhibitor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     compositions and to block beta-3 integrin fibrogen binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Page 7;
 ა
                                                                                                                                                                                                                                                                                            Cheresh DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                      94US-0366665
94US-0210715
                                                                                                                                                                                                                                                                                                                                                                                                  95WO-US03035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gpp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  peptide; 5 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     English
                                                                                                                                                            English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  inhibitor; apoptosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 27;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     restenosis; c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 15;
2.1e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               no.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cyclic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                      that associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     adhesion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     in wound
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
```

```
RESULT.
W33057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT
R82389.
                                                                δÃ
                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ş
                                                                                         Query Match
Best Local Similarity
Matches 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                           R82386-96 are a group of inhibitor peptides of integrin alpha-v-beta-3. The inhibitor peptides may be administered in a compan. and are useful for inhibition of inflamed tissue angiogenesis, e.g. that associated with rheumatoid arthritis, retinal angiogenesis associated with diabetic retinopathy, that associated with haemangioma, solid tumours, or solid tumour metastases. The alpha-v-beta-3 atagonists
                                                                                                                                                                                                                                                                                                        Inhibition of angiogenesis in a tissue, e.g. following angioplasty - by admin. of a compsn. comprising an alpha-v-beta3 antagonist, useful for regression of established tumours, treating inflamed
                                                                                                                                                                                                                                                                                                                                                      WPI; 1995-344463/44.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cyclic integrin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    03-MAY-1996
                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                          Claim
                                                                                                                                                                                                                                                                                                                                                                            Brooks
                                                                                                                                                                                                                                                                                                                                                                                                                        30-DEC-1994;
18-MAR-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         09-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28-SEP-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO9525543-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Integrin; alpha-v-beta-3; inhibitor; angiogenesis; antagonist;
fibrinogen; inflammation; apoptosis; restenosis; cyclic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R82389;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R82389 standard;
                                                                                                                                                                                                                                                                                                                                                                                                  (SCRI ) SCRIPPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
nes 5; Conserv
                                              Н
                                                                    _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 RGDFV 5
                                                                                                                                                                      also useful to induce apoptosis in neovasculature in a tissue. inhibitor peptides \epsilon r: pref. cyclic and contain an RGD sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      σ
                                                                   RGDFV 5
                                            rgdfv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rgdfv 5
                                                                                                                                                                                                                                                                         4; Page 47;
                                              σ
                                                                                                                                                  G
                                                                                                                                                                                                                                                                                                                                                                           Cheresh DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; ilarity 100.0%; Conservative
                                                                                          Conservative
                                                                                                                                                 Æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                        94US-0366655
94US-0210715
                                                                                                                                                                                                                                                                                                                                                                                                                                                         95WO-US03035
                                                                                                                                                                                                                                                                                                                                                                                                  RES INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             alpha-v-beta-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note= "D-Val"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              peptide;
                                                                                                                                                                                                                                                                         135pp; English.
                                                                                                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                         0
                                                                                         Score 27; DB Pred. No. 2.1 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 27; DB 16;
Pred. No. 2.1e+05;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            inhibitor peptide
                                                                                        DB 16;
2.1e+05;
les 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                             Length
                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                               . . . .
                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

Q

-4

Conservative

0

Indels

0;

Gaps

0

밁

rgdfv 5 RGDFV 5

```
Query Match
Best Local S
Matches 5
                                                                                                                                                                                                                            prematurity or neovascular glaucoma), corneal neovascular disorders (especially transplantation, herpetic or luetic keratitis, pterygium and neovascular pannus associated with wearing contact lenses), haemangiona, solid tumours and their metastases or cytokines (especially vascular endothelial growth factor, transforming growth factor alpha or epidermal growth factor). The antagonist has the advantage of being very specific, affecting no processes other than angiogenesis and therefore of relatively low
                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present RGD containing peptide is an antagonist of the alpha-v, beta-5 vitrorectin receptor, which can be used to inhibit angiogenesis in alpha-v, beta-5 containing tissue, specifically angiogenesis as a result of inflammation (especially rheumatoid arthritis), eye disease (especially diabetic retinopathy, age related macular degeneration, ocular histoplasmosis, retinopathy of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          vitronectin receptor; inhibition; angiogenesis; inflammation; rheumatoid arthritis; eye disease; diabetic retinopathy; age related macular degeneration; ocular histoplasmosis; retinopathy; prematurity; neovascular glaucoma; conneal neovascular disorder; transplantation; herpetic; luet keratitis; pterygium; neovascular pannus; haemangioma; solid tumour; metastasis; cytokine; low toxicity; vascular endothelial growth factor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rnhibiting angiogenesis with an antagonist selective for the
alpha-v,beta-5 integrin receptor - e.g. antibody, RGD peptide
organic mimetic, for treatment of inflammation, eye disease, t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic
                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1997-155019/15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Brooks P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14-AUG-1995;
14-AUG-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13-AUG-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           27-FEB-1997.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               W09706791-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   vascular endothelial growth factor;
transforming growth factor alpha; epidermal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RGD containing peptide; antagonist; alpha-v, beta-5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alpha-v, beta-5 vitronectin receptor antagonist
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     W33057 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (SCRI ) SCRIPPS RES INST.
                                                                                                                                                                                                     toxicity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ن.
     Similarity
5; Consert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Page 105; 126pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cheresh DA,
                                                                                                                                                G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   95US-0514799.
96ZA-0006886.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    96WO-US13194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  peptide;
                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "D-form residue"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Friedlander M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       English.
Score 27; DB io,
Pred. No. 2.1e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      growth factor; cyclic
                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       luetic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tumours
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ٥ŗ
```

```
RESULT
W33055
                                                                              The present RGD containing peptide is an antagonist of the alpha-v, beta-5 vitromectin receptor, which can be used to inhibit angiogenesis in alpha-v, beta-5 containing tissue, speicfically angiogenesis as a result of inflammation (especially rheumatoid arthritis), eye disease (especially diabetic retinopathy, age related macular degeneration, ocular histoplasmosis, retinopathy of prematurity or neovascular glaucoma), corneal neovascular isorders (especially transplantation, herpetic or luetic keratitis, pteryglum and neovascular pannus associated with wearing contact lenses), haemangioma, solid tumours and their metastases or cytokines (especially vascular endothelial growth factor). The antagonist has the advantage of being very specific, affecting no processes other than angiogenesis and therefore of relatively low
                    Query Match
Best Local S
       Matches.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rheumatoid arthritis; eye disease; diabetic retinopathy; age related macular degeneration; ocular histoplasmosis; retinopathy; prematurity; neovascular glaucoma; corneal neovascular disorder; transplantation; herpetic; keratitis; pteryglum; neovascular pannus; haemangioma; solid tumour; metastasis; cytokine; low toxicity; vascular endothelial growth factor; transforming growth factor alpha; epidermal growth factor
                                                                                                                                                                                                                                                                                                                                                                                         Inhibiting angiogenesis with an antagonist selective for the alpha-v,beta-5 integrin receptor - e.g. antibody, RGD peptide or organic mimetic, for treatment of inflammation, eye disease, tumours
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14-AUG-1995;
14-AUG-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              W33055 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1997-165019/15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Brooks P, Cheresh DA, Friedlander M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13-AUG-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO9706791-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic
                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                  Claim 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            vitronectin receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RGD containing peptide; antagonist; alpha-v, beta-5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            œ
      Similarity
5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SCRIPPS RES INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       beta-5 vitronectin
                                                                                                                                                                                                                                                                                                                                                 Page 105;
                                                                              u
    100.
nilarity 100.
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                              ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              95US-0514799
96ZA-0006886.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           96WO-US13194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note= "D-form residue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             peptide;
                                                                                                                                                                                                                                                                                                                                               126pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         inhibition; angiogenesis; inflammation;
                     .0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                υı
    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      receptor antagonist
                  Sccre 27;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     epidermal growth factor; cyclic
DB 10,
2.1e+05;
0;
                             Length 5;
                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 luetic
```

Mismatches

Indels

Ç

Gaps

0

Query Match
Best Local Similarity
Matches 5; Conserv

Conservative

100.0%; S 100.0%; F tive 0;

Score 27; DB 19; I pred. No. 2.1e+05; pred. No. 2.1e+05;

Length Indels

0;

Gaps

```
먒
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q
                                                                                      techniques. The invention relates to the discovery that anglogenesis is mediated by the specific vitronectin receptor alpha-v beta-3, and that inhibition of alpha-v beta-3 function inhibits anglogenesis. Claimed antagonists of alpha-v beta-3 comprise C-terminal fragments (see W41083-94) of human or chicken matrix metalloproteinase-2, fusion polypeptides, cyclic or linear polypeptides, derivatised polypeptides, a monoclonal antibody or organic mimetic compound. They can be used to inhibit anglogenesis in flammed tissue (for treatment of arthritis or rheumatoid in inflammed tissue (for treatment of arthritis or rheumatoid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Angiogenesis; inhibitor; antagonist; integrin alpha-v beta-3; vitronectin receptor; rheumatoid arthritis; tumour; metastasi diabetic retinopathy; macular degeneration; restenosis; thera
                                                                                                                                                                                                                                                                             This synthetic RGD-containing cyclic peptide, designated 62184 65203, is a particularly preferred peptide that has integrin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        31-MAY-1996;
31-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            circular; cyclic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        W41099;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                        arthritis), in solid tumours or metastases (particularly to induce regression or inhibit tumour growth), and in ocular disorders such as diabetic retinopathy and macular degeneration, as well as to
                                                                                                                                                                                                                                               alpha-v beta-3 antagonist activitinhibition of fibrinogen binding
                                                                                                                                                                                                                                                                                                                                                             treating tumours, inflammation, eye diseases
                                                                                                                                                                                                                                                                                                                                                                             Packaging material containing polypeptide antagonist of alphav, beta3 integrin - used for inhibition of anglogenesis, and for
                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1998-032334/03.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    04-DEC-1997.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO9745137-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alpha-v beta-3 antagonist cyclic peptide 62184 (66203)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         08-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       W41099 standard; Peptide;
                                                                                                                                                                                                                                 It can be prepared using standard solid-phase synthesis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (SCRI ) SCRIPPS RES INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ဖ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RGDFV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                G
                                                                                                                                                                                                                                                                                                                               Page 48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cheresh DA;
 u
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        96US-0018733
96US-0015869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     97WO-US09158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note= "D-form residue"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                              234pp; English.
                                                                                                                                                                                                                                                 activity. It exhibits preferential binding to the alpha-v beta-3 receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                  or
P
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 10
Query Match
Best Local Similarity
Matches 5; Conserv
                                                                                                                techniques. The invention relates to the discovery that angiogenesis is mediated by the specific vitronectin receptor alpha-v beta-3 innction inhibits angiogenesis. Claimed antagonists of alpha-v beta-3 innction inhibits angiogenesis. Claimed antagonists of alpha-v beta-3 comprise C-terminal fracments (see W41083-94) of human or chicken matrix metalloproteinase-2, fusion polypeptides, cyclic or linear polypeptides, derivatised polypeptides, a monoclonal antibody or organic mimetic compound. They can be used to inhibit angiogenesis in inflammed tissue (for treatment of arthritis or rheumatoid arthritis), in solid tumours or metastases (particularly to induce regression or inhibit tumour growth), and in ocular disorders such as diabetic retinopathy and macular degeneration, as well as to
                                                                                                                                                                                                                                                                                                  alpha v beta-3 antagonist activity. It exhibits preferential inhibition of fibrinogen binding to the alpha-v beta-3 receptor. It can be prepared using standard solid-phase synthesis techniques. The invention relates to the discovery that
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          04-DEC-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 circular; cyclic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                W41101;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             W41101 standard;
                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                 This synthetic RGD-containing cyclic peptide, designa is a particularly preferred peptide that has integrin
                                                                                                                                                                                                                                                                                                                                                                                                               Example 1; Page 48; 234pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                               Packaging material containing polypeptide antagonist of alphav, beta3 integrin - used for inhibition of angiogenesis, and for treating tumours, inflammation, eye diseases etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1998-032334/03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31-MAY-1996;
31-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   diabetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alpha-v beta-3 antagonist cyclic peptide 62187.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              08-JUN-1998 (first entry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (SCRI ) SCRIPPS RES INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO9745137-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  vitronectin receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Angiogenesis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RGDFV 5
                                                                                                             restenosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  retinopathy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cheresh DA;
100.0%;
llarity 100.0%;
Conservative (
                                                                             Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                inhibitor; antagonist; integrin alpha-v beta-3;
eceptor; rheumatoid arthritis; tumour; metastasis;
nopathy; macular degeneration; restenosis; therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            96US-0018733
96US-0015869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           97WO-US09158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Peptide; 5 AA
                                                                                                             claimed).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "D-form residue"
              Score 27;
Pred. No.
              DB 19;
2.1e+05;
                                                                                                                                                                                                                                                                                                                                                                                     designated 62187,
                             Length 5;
```

0;

Mismatches

Indels

0

Gaps

Ö

Query Match Best Local S Matches 5

5 Similarity

Conservative

0;

100.0%;

Score 27; Pred. No. Mismatches

; DB 19; . 2.1e+05; 0;

Length Indels

0

Gaps

```
FERRENCE WAS SAN WAS S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 윰
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NA
NA
                                                   This synthetic RGD-containing cyclic peptide, designated 121974 or 85189, is a particularly preferred peptide that has integrin alpha-v beta-3 antagonist activity. It can be prepared using standard solid-phase synthesis techniques. The invention relates to the discovery that angiogenesis is mediated by the specific vitronectin receptor alpha-v beta-3, and that inhibition of alpha-v beta-3 function inhibits angiogenesis. Claimed antagonists of alpha-v beta-3 comprise C-terminal fragments (see W41083-94) of human or chicken matrix metalloproteinase-2, kusion polypeptides, cyclic or linear polypeptides, derivatised polypeptides, a monoclonal antibody or organic mimetic compound. They can be used to inhibit angiogenesis in inflammed tissue (for treatment of arthritis or rheumatoid arthritis), in solid tumours or metastases (particularly to induce regression or inhibit tumour growth), and in ocular disorders such as diabetic retinopathy and macular degeneration, as well as to treat restenosis (all claimed).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Packaging material containing polypeptide antagonist beta3 integrin - used for inhibition of angiogenesis, treating tumours, inflammation, eye diseases etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 W41109 standard;
      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1998-032334/03.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Brooks P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    31-MAY-1996;
31-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             04-DEC-1997.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO9745137-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 circular; cyclic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              vitronectin receptor; rheumatoid arthritis; tumour; metastasis;
diabetic retinopathy; macular degeneration; restenosis; therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Angiogenesis; inhibitor; antagonist; integrin alpha-v beta-3; vitronectin receptor; rheumatoid arthritis; tumour; metastasi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alpha-v beta-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 W41109;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Example 1; Page 51; 234pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (SCRI )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    08-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rgdfv 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RGDEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SCRIPPS RES INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cheresh DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           UI
      ŲI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
      AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 antagonist cyclic peptide 121974 (85189).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       96US-0015869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                96US-0018733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             97WO-US09158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of alphav,
and for
```

```
RESULT
W41240
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FIRXOXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                        The present peptide represents an alpha-v-beta-5 integrin antagonists. CR Alpha-v-beta-5 is a vitronectin receptor. Inhibitors of alpha-v-beta-5 can inhibit angiogenesis. The specification describes a novel can inhibit angiogenesis in the specification of angiogenesis i.e. an alpha-v-beta-5 and includes a part of the C-terminal domain of MMP-2. The antagonists are used to inhibit angiogenesis in inflamed tissue, in solid tumours or metastases, and in a wide range of ocular disorders (e.g. diabetic or other forms of retinopathy, neovascular glaucoma, or corneal transplants). They are particularly used to induce regression or to inhibit growth of tumours. The alpha-v-beta-5 antagonists can also be used to treat restenosis caused by migration of smooth muscle cells following angloplasty and to reduce blood supply to selected tissues. The antagonists particularly inhibit neovascular glation where this is
                                                               induced by cytokines, e.g. transforming growth factor alpha, epicermal growth factor or especially vascular endothelial growth factor.
                                                                                                                                                                                                                                                                                                                       Disclosure;
                                                                                                                                                                                                                                                                                                                                                    treating
                                                                                                                                                                                                                                                                                                                                                                 Packaging material containing polypeptide antagonist of alphav, beta5 integrin - used for inhibition of anglogenesis, and for
                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1998-041758/04.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (SCRI ) SCRIPPS RES INST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        31-MAY-1996;
31-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 04-DEC-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO9745447-AI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            angiogenesis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alpha-v-beta-5 antagonist;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alpha-v-beta-5 antagonistic peptide 62184.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    09-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   W41240;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               W41240 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RGDFV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rgdfv
                                     information provided.
                                                    this sequence does
                                                                                                                                                                                                                                                                                                                                                      tumours, inflammation,
                                                                                                                                                                                                                                                                                                                                                                                                                                             Cheresh DA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ر.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           σı
                                                                                                                                                                                                                                                                                                                        Page 41; 117pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tumour
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        96US-0018733
96US-0015869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    97WO-US09099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note= "D-form residue"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     onist; treatment; vitronectin receptor; inhibition;
growth; restenosis; neovascularisation.
                                                                                                                                                                                                                                                                                                                                                                                                                                             Friedlander M;
                                                not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5 AA.
                                                 appear in
                                                                                                                                                                                                                                                                                                                                                    eye diseases etc.
                                                    the
                                                helial growth factor specification; it was
                                                   it was created
```

Query Match Best Local S Matches

Similarity 5; Conserv

Conservative

0

Mismatches

0;

0

Query Match Best Local Similarity

100.0%;

Score 27; Pred. No.

DB 19; 2.1e+05;

Length

Sequence

100.0%;

Score 27; Pred. No.

DB 19; 2.1e+05; thes 0;

Length Indels

Sequence

υī

Ž,

```
RESULT
W41243
 D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ajpar T
                                                                                        labelled package that contains an inhibitor of angiogenesis i.e. an alpha-v-beta-5 antagonising polypeptide that binds to integrin alpha-v-beta-5 and includes a part of the C-terminal domain of MMP-2. The antagonists are used to inhibit angiogenesis in inflamed tissue, in solid tumours or metastases, and in a wide range of ocular disorders (e.g. diabetic or other forms of retinopathy, neovascular glaucoma, or corneal transplants). They are particularly used to induce regression or to inhibit growth of timours. The alpha-v-beta-5 antagonists can also be used to treat restenosis caused by migration of smooth muscle cells following angioplasty and to reduce blood supply to selected tissues. The antagonists particularly inhibit neovascularisation where this is
                                              induced by cytokines, e.g. transforming growth factor alpha; epidermal growth factor or especially vascular endothelial growth factor.

note: this sequence does not appear in the specification; it was creat
                                                                                                                                                                                                                                                                     The present peptide represents an alpha-v-beta-5 integrin antagonists. Alpha-v-beta-5 is a vitronectin receptor. Inhibitors of alpha-v-beta-5 can inhibit angiogenesis. The specification describes a novel
                                                                                                                                                                                                                                                                                                                                                                                     Packaging material containing polypeptide antagonist of alphave beta5 integrin - used for inhibition of angiogenesis, and for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     31-MAY-1996;
31-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         angiogenesis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alpha-v-beta-5 antagonist; treatment; vitronectin receptor; inhibition; angiogenesis; tumour growth; restenosis; neovascularisation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         W41243;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       W41243 standard; protein; 5 AA
                                                                                                                                                                                                                                                                                                                                      Disclosure; Page 41; 117pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1998-041753/04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Brooks
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   04-DEC-1997.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 W09745447-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alpha-v-beta-5 antagonistic peptide 62187.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          09-JUN-1998
                               using information provided.
                                                                                                                                                                                                                                                                                                                                                                    treating tumours, inflammation, eye diseases etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (SCRI ) SCRIPPS RES INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 RGDFV
5 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cheresh DA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tumour
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     96US-0018733
96US-0015869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   97WO-US09099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           growth; restenosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "D-form residue"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "peptide is made cyclic via the first last residues"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Friedlander
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and
                                                created
```

S

```
무
                                                                                                                                                          can inhibit angiogenesis. The specification describes a novel labelled package that contains an inhibitor of angiogenesis i.e. an calpha-v-beta-5 antagonising polypeptide that binds to integrin calpha-v-beta-5 and includes a part of the C-terminal domain of MMP-2. The antagonists are used to inhibit angiogenesis in inflamed tissue, in solid tumours or metastases, and in a wide range of ocular disorders (e.g. diabetic or other forms of retinopathy, neovascular glaucoma, or corneal transplants). They are particularly used to induce regression or to inhibit growth of tumours. The antagonists can also be used to treat restenosis caused by migration of smooth muscle cells following angioplasty and to reduce blood supply to selected tissues. The antagonists particularly inhibit neovascularisation where this is conduced by cytokines, e.g. transforming growth factor alpha, epidermal conte: this sequence does not appear in the specification; it was created on the context of t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
  Matches
                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Packaging material containing polypeptide antagonist of alphav, beta5 integrin - used for inhibition of angiogenesis, and for treating tumours, inflammation, eye diseases etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     31-MAY-1996;
31-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              angiogenesis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present peptide represents an alpha-v-beta-5 integrin antagonists. Alpha-v-beta-5 is a vitronectin receptor. Inhibitors of alpha-v-beta-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1998-041758/04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                04-DEC-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alpha-v-beta-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alpha-v-beta-5 antagonistic peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         09-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          W41247 standard;
                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO9745447-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (SCRI)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   rgdfv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RGDFV 5
  5;
                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SCRIPPS RES INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cheresh DA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Page 38; 117pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tumour
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    antagonist;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     96US-0018733.
96US-0015869.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   97WO-US09099.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein;
                                                                                                                                               provided.
                 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                growth;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "D-form residue"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Friedlander
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                treatment; vitronectin receptor; inhibition; h; restenosis; neovascularisation.
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                    Score 27; pred. No.
  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                 DB 19;
2.1e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
  Indels
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
Gaps
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                        This invention is concerned with novel cyclic peptides of formula cyclo(aArg-aCly-aAsp-aX-aY) where aArg = Arg or aza-Arg, aGly = Gly or cza-Asp, aAsp, aX = Ala, Asn, ASp, Arg, Cys, Gln, Gly, Gly, His, Ile, Leu, Lys, Met, Nle (norleucine), Orn (ornithine), Phe, Phg (phenylclycine), Pro, Ser, Thr, Tic (tetrahydroisoquinoline-3-carboxylic acid), Trp, Tyr, Val or NH-Q-CO, or the corresponding caza-amino acids, Q = 1-6C alkylene, at least one amino acid (aa) in the peptide has the alpha-carbon atom replaced by nitrogen also the aa may be derivatised and are coupled together by peptide bonds and optically active amino acids may be in D- or L-forms. The peptides are integrin inhibitors, specifically for treating and preventing thrombosis, cardiac inflarnation and infections, or generally any disease where angiogenesis inflammation and infections, or generally any disease where angiogenesis is involved, in human or veterinary medicine. The peptides also have
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cardiac infarct; coronary heart disease; arteriosclerosis; osteoporosis; inflammation; infection; angiogenesis; antimidiagnosis; platelet metabolism; fibrinogen receptor; cancer
                                                                                                                                                                                                                                                                                  New cyclic penta:peptide(s) containing aza-amino acid - are inhibitors of integrin-ligand interaction, used to treat e.g. thrombosis, cardiac infarct, coronary heart disease and tumours
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic.
antimicrobial activity, are used and for studying metabolism of pl
                                                                                                                                                                                                                                                      Claim 3a;
                                                                                                                                                                                                                                                                                                                                              WPI; 1999-072017/07
                                                                                                                                                                                                                                                                                                                                                                         Goodman
                                                                                                                                                                                                                                                                                                                                                                                                       (MERE ) MERCK PATENT
                                                                                                                                                                                                                                                                                                                                                                                                                                  04-JUL-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              04-JUL-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             07-JAN-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DE19728524-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cyclic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cyclic azapeptide #1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-APR-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        W92307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           intracellular signalling; GpIIb/IIIa receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            J--3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RGDFV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rgdfv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      peptide; a
c infarct;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        standard;
                                                                                                                                                                                                                                                      Page 11; 12pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  u
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            UI
                                                                                                                                                                                                                                                                                                                                                                         Jonczyk A, Kessler
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                    97DE-1028524.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                97DE-1028524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    azapeptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        peptide; 5
                                                                                                                                                                                                                                                                                                                                                                                                       GMBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "can be D-form residue"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "The carboxy group of Val(5) is condensed the amino group of Arg(1) to form a cycli peptide. Not true N- and C- terminus. Val(5) can be modified by N-Me"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "aza-Gly"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "can be D-form
                                                                                                                                                                                                                                                      German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         infection; angiogenesis; antimicrobial;
ism; fibrinogen receptor; cancer; metast
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   integrin
platelets
                                                                                                                                                                                                                                                                                                                                                                         Ħ,
                for diagnosis and location of
                                                                                                                                                                                                                                                                                                                                                                         Schmitt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       inhibitor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 residue"
                                                                                                                                                                                                                                                                                                                                                                         ٦,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             matrix metalloproteinase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       treatment;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tumour;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       thrombosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            metastasis;
                  thrombi,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      onto
```

```
CC activation or intracellular signalling mechanisms of the fibrinogen
CC receptor, and for affinity purification of integrins. The peptides
CC inhibit interaction between the alpha v, beta 3 and beta 5 receptors with
CC their ligands, e.g. they prevent binding of fibrinogen to the GPIID/IIIa
CC receptor. Thus preventing metastatic spread of cancers, and prevent
CC binding of matrix metalloproteinase to the vitromectin (alpha v beta 3)
CC receptor. This sequence is a specific claimed example of a novel peptide
CC of the invention.

XX
SQ Sequence 5 AA;

Ouery Match
Best Local Similarity 100.0%; Score 27; DB 20; Length 5;
Best Local Similarity 100.0%; Pred. No. 2.1e+05;
Matches 5; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 1 RGDFV 5
Db 1 rgdfv 5
Search completed: March 6, 2001, 09:45:52
Job time: 58 sec
```

THIS PAGE BLANK (USPTO)

```
Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Post-processing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             seq length:
seq length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-081-522-7
27
1 RGDFV 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BLOSUM62
Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Issued_Patents_AA: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      174772 seqs, 17957048 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              March 6, 2001, 09:45:18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /cgn2_6/ptodata/2/iaa/5A_COMB.pep:*
/cgn2_6/ptodata/2/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/2/iaa/6_COMB.pep:*
/cgn2_6/ptodata/2/iaa/PCTUS_COMB.pep:*
/cgn2_6/ptodata/2/iaa/backfiles1.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gapext 0.5
                                          US-08-616-770-1

US-08-754-773B-10

US-09-141-127-23

US-09-155-721-1

US-09-155-721-2

US-09-155-721-4

US-09-155-721-5

US-09-155-721-6

US-09-155-721-7

US-09-155-721-8

US-09-155-721-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-07-932-200-10

US-08-596-116A-68

US-08-668-871-12

US-08-669-683-12

US-08-387-749-10

US-08-335-832-25
                                                                                                                                                                                                                                                                                                                            US-08-315-026B-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Search time 19.1 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (without alignments)
4.701 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ltd
                                                                                                                                   At No.
Aquence 10, At June 10, At June 10, At June 10, At June 10, Appli Sequence 10, Appli Sequence 1, Appli Sequence 1, Appli Sequence 4, Appli Sequence 1, Appli Sequence 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
Sequence
                                                                          Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                      Sequence
                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                      280,500,000
                                                                                                                                                                                                                                                                                                                                                                            10,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Appli
Appli
Appli
Appli
Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 1
US-08-210-715-5
                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Brooks, Pe
APPLICANT: Cheresh, I
TITLE OF INVENTION: N
                                                                                                                                                                                                                                                             MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES: 1
                                                                                                                                                                                      FRAGMENT TYPE:
                                                                                                                                                                                                                  HYPOTHETICAL:
                      OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                      NAME/KEY: Peptide LOCATION: 1..5
                                                                                                                                                                                                                                                                                                  TOPOLOGY:
                                                                                                                                                                                                                                                                                                                      TYPE: amino acid
STRANDEDNESS: sir
                                                                                                                                                                                                                                                                                                                                                                         LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY: USA
ZIP: 92037
INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                  5 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                               (619)
                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                            circular
                                                                                                                                                                                      internal
                                                                                                                                                                                                                                                                   peptide
                                                                                                                                                                                                                                                                                                                            single
```

45	44	43	42	41	40	39	38 8	37	36	35	34	33	32		30	29
21	21	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
	_			_	81.5										81.5	81.5
ຜ	UI	UI	UI	υ	ហ	ر ح	տ	G	տ	ر ت	σ	5	رن ن	ψı	υı	ഗ
μ	ш	ω	ω	ω	ω	ω	ω	ω	w	ω	ω	ω	w	ω	ω	ω
US-08-210-715-9	US-08-210-715-6	US-08-694-387A-40	US-08-694-387A-39	US-08-694-387A-38	US-08-694-387A-37		US-08-694-387A-34		US-08-694-387A-32	-3872	US-08-694-387A-29	US-08-694-387A-27	US-08-694-387A-25	US-08-694-387A-24	US-08-694-387A-23	US-08-694-387A-22
Sequence 9, Appli	Sequence 6, Appli	Sequence 40, Appl	Sequence 39, Appl	Sequence 38, Appl	Sequence 37, Appl	Sequence 35, Appl	Sequence 34, Appl	•	•	•	Sequence 29, Appl	`	•	Sequence 24, Appl	Sequence 23, Appl	Sequence 22, Appl

ALIGNMENTS

```
S-OB-100-715-5
S-OB-210-715-5
Sequence 5. Application US/08210715
Sequence 5. Application US/08210715
Patent No. 5753230
GENERAL INFORMATION:
APPLICANT: Cheresh, David A
FITLE OF INVENTION: NETHODS AND COMPOSITIONS USEFUL FOR
TITLE OF INVENTION: NETHODS AND COMPOSITION OF ANGIOGENESIS

ADDRESSEE: Office of Patent Counsel, The Scripps
ADDRESSEE: Office of Patent Counsel, The Application of Inventation:
ADDRESSEE: Office of Patent Counsel, The Application of Inventation:
ADDRESSEE: Office of Patent Counsel, The Application of Inventation:
ADDRESSEE: Office of Patent Counsel, The Application of Inventation:
ADDRESSEE: Office of Patent Counsel, The Application of Inventation:
ADDRESSEE: Office of Patent Counsel, The Application of Inventation:
ADDRESSEE: Office of Patent Counsel, The Application of Inventation:
ADDRESSEE: Office of Patent Counsel, The Application of Inventation:
ADDRESSEE: Office of Patent Counsel, The Application of Inventation:
ADDRESSEE: Office of Patent Counsel, The Application of Inventation:
ADDRESSEE: Office of Patent Counsel, The Application of Inventation of Inventation:
ADDRESSEE: Office of Patent Counsel of Inventation of
```

```
RESULT 2
US-08-210-715-7
; Sequence 7, Application US/08210715
; Patent No. 5753230
                                                                                                                           OTHER INFORMATION:
OTHER INFORMATION:
US-08-210-715-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
В
                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-210-715-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                         TELEFAX: (619) 554-631: INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                               REGISTRATION NUMBER: 34,163
REFERENCE/DOCKET NUMBER: TSRI 419.0
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Cheresh, I TITLE OF INVENTION: NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                 TOPOLOGY: circu MOLECULE TYPE: pe HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                FEATURE:
                                                                                                                                                                                                                                           FRAGMENT TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                          ANTI-SENSE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/08/210,715
FILING DATE: 18-MAR-1994
CLASSIFICATION: 514
                                                                                                                                                                        OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                           LENGTH: 5 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Match 100.0%;
Local Similarity 100.0%;
tes 5; Conservative
                                                       Local Similarity
les 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY: USA
ZIP: 92037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE: Office of Patent Counsel, The Scripps ADDRESSEE: Research Institute STREET: 10666 No. 5753230th Torrey Pines Road, TPC-8
                                                                                                                                                                                                 LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME:
                                                                                                                                                                                                                NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 RGDFV 5
                            1 RGDFV 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                La Jolia
: CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fitting, Thomas
                                                                                                                                                                                                                                                                                                                                                                                       (619)
                                                                                                                                                                                                                                                          ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Brooks, Peter
                                                        Conservative
                                                                                                                                                                                                                                                                                                  circular
                                                                                                                                                                                                             Peptide
                                                                                                                                                                                                                                                                                                                                                                                                      (619) 554-2937
                                                                                                                                                                                                                                           internal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Floppy disk
                                                                                                                                                                                                                                                                                   peptide
                                                                                                                                                                                                                                                                                                                                                                       9)
, 554-6312
, 501: 7:
                                                                    100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              David A METHODS AND COMPOSITIONS USEFUL FOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INHIBITION OF ANGIOGENESIS
                                                                                                                                          letters
                                                                                                                                            /label= cyclo /label= cyclo signifies a cyclic peptide; lower case letters indicate a D-amino acid; capital case letters are a remains acid."
                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 27;
Pred. No.
                                                                    Score 27; DB 1;
Pred. No. 1.3e+05;
                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1.3e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 1;
                                                                                Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 5;
                                                                                                                                          acid.
                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

```
ICCATION: 1.5
COTHER INFORMATION:
COTHER INFORMATION:
COTHER INFORMATION:
COTHER INFORMATION:
COTHER INFORMATION:
COTHER INFORMATION:
RESULT 4
US-08-366-655-7
; Sequence 7, Application US/08366665
; Patent No. 5766591
                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 3
                                                                                               밁
                                                                                                                                                         Query Match
Best Local S
Matches 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 5, Application US/08366665
Patent No. 5766591
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US/08,
FILING DATE: 30-DEC-1994
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08,
FILING DATE: 18-MAR-1994
ATTORNEY/AGENT INFORMATION:
NAME: Fitting, Thomas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: (619) 554-631
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                            HYPOTHETICAL:
ANTI-SENSE: NO
FRAGMENT TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET: 1000 CITY: La Jolla CMATE: CA
                                                                                                                                                                                                                                                                                                                                                                                        MOLECULE TYPE: pe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: Fitting, Thomas
REGISTRATION NUMBER: 34,153
REFERENCE/DOCKET NUMBER: TS
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619) 554-2937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: Patentin Rel
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES: 14
CORRESPONDENCE ADDRESS:
ADDRESSEE: Office of Patent Counsel, The Scripps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Brooks, 1
APPLICANT: Cheresh,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                               NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                     STRANDEDNESS:
                                                                                                               1 RGDFV 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE:
                                                                                               ۱--۱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH:
                                                                                               RGDFV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                92037
                                                                                                                                                         Similarity 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                     amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       E: Research Institute
10666 No. 5766591th Torrey Pines Road, TPC-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5 amino acids
                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Brooks, Peter
                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                            Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                       circular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Floppy disk
                                                                                                                                                                                                                                                                                                                                                            internal
                                                                                                                                                                                                                                                                                                                                                                                                       peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9) 554-6312
1 554-6312
2 MO: 5:
                                                                                                                                                                                                                                                                                                                                                                                                                                       single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 David A METHODS AND COMPOSITIONS USEFUL FOR INHIBITION OF ANGIOGENESIS
                                                                                                                                                                         100.0%;
                                                                                                                                                                                                                                     /label= cyclo
/note= "Cyclo signifies a cyclic peptide; lower
case letters indicate a D-amino acid; capital
lefters indicate a L-amino acid."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US 08/210,715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US/08/366,665
                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TSRI 419.1
                                                                                                                                                       Score 27; DB 1; L
Pred. No. 1.3e+05;
Pred. No. 1.3e+05;
                                                                                                                                                                                      Length 5;
                                                                                                                                                         Indels
                                                                                                                                                          0
                                                                                                                                                          Gaps
```

GENERAL INFORMATION:

```
밁
                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Thes 5; Conserv
                                                                                                                                                    US-08-616-770-2
                                                                                                                                                                    RESULT
                                                                                                                         Patent No. 5849692
                                                                                                                                     Sequence 2,
                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: (619) 554-63 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE:
HYPOTHETICAL: N
ANTI-SENSE: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08
FILING DATE: 18-MAR-1994
ATTORNEY/AGENT INFORMATION:
NAME: Fitting, Thomas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
ADDRESSEE: Office of Patent Counsel, The Scripps
ADDRESSEE: Research Institute
STREET: 10666 No. 5766591th Torrey Pines Road, TPC-8
CITY: La Jolla
STATE: CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REGISTRATION NUMBER: 34,163
REFERENCE/DOCKET NUMBER: TS:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES:
   APPLICANT:
                               APPLICANT:
                                               APPLICANT:
                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FRAGMENT TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION:
                                                             APPLICANT:
                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                 OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/0 FILING DATE: 30-DEC-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION:
                                                                                                                                                                                                                 1 RGDFV 5
                                                                                                                                                                                                                                  1 RGDFV 5
                                                                                                                                                                                                                                                                                                                                                                                                                             OCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                              VAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           92037
                                                                                                                                                                                                                                                                                                                                                                    INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   amino acid
                                                                                                                                      Application US/08616770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5 amino acids
                                          Holzemann, Gunter
Felding-Habermann, I
Rippmann, Friedrich
                                                                                                                                                                                                                                                                                                                                                                                                                                           Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Cheresh,
                                                                                                                                                                                                                                                                             Conservative
Diefenbach, Beate
Kessler, Horst
Haubner, Roland
                                                                                       Jonczyk, Alfred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       circular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (619)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            internal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 554-6312
                                                                                                                                                                                                                                                                                         100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           David A METHODS AND COMPOSITIONS USEFUL FOR INHIBITION OF ANGIOGENESIS
                                                                                                                                                                                                                                                                                                                                                                 /label= cyclo /note= "Cyclo signifies a cyclic peptide; lower case letters indicate a D-amino acid; capital letters indicate a L-amino acid."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US 08/210,715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US/08/366,665
                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TSRI 419.1
                                                                                                                                                                                                                                                                                        Sccre 27;
Pred. No. 1
                                                             Brunhilde
                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                        .3e+05;
                                                                                                                                                                                                                                                                                                        Length 5;
                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                          0;
```

```
Query Match
Best Local Similarity
---hes 5; Conserve
                                                                                                                                                                                                                                                                                                     RESULT 6
US-07-932-200-10
                                                                                                                                                                                                                                                                                                                                                                     뭉
                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-616-770-2
                                                                                                                                                                                                                                                                     Sequence 10, Patent No. 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 15-MAR-1996
CLASSIFICATION: 514
PRIOR APPLICATION DATA: US 08/220,858
APPLICATION NUMBER: US 08/220,858
FILING DATE: 31-MAR-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE P 43 10 543.9
FILING DATE: 01-APR-1993
                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
NAME: Heaney, Brion P.
REGISTRATION NUMBER: 32,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                           CORRESPONDENCE ADDRESS:
ADDRESSEE: BROWDY AND NEIMARK
                                                                                                                                                          NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELECOMMUNICATION INFORMATION: TELEPHONE: 703-243-6333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET: 2200
CITY: Arlington
                                                  COUNTRY:
                                                                                                                                                                         ITLE OF INVENTION: METHOD FOR GENERATING AND SCREENING ITLE OF INVENTION: USEFUL PEPTIDES
                                                                           STREET: 419 SEVE
CITY: WASHINGTON
STATE: D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY: U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                1 RGDFV 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH:
                                                 20004
                                                                                                                                                                                                                                                                         5366862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          64191
                                                                                                                                                                                                                                                                                     Application US/07932200
                                                                                                             419 SEVENTH STREET, N.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2: Millen, White, Zelano & Branigan, P.C. 2200:Clarendon Boulevard, Suite 1400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Wermuth, Jochen
VENTION: Cyclic Peptides Containing Arg-Gly-Asp, and
VENTION: Derivatives Thereof, as Adhesion Inhibitors
                                                            U.S.A.
                                                                                                                                                                                                      HOPFINGER, ANTON J.
LE BRETON, GUY
                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        U.S.A.
                                                                                                                                                                                                                                          VENTON,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             circular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        peptide
                                                                                                                                                                                                                                         DUANE L
                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US/08/616,770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       32,542
                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MERCK 1566C1
                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 27;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                               1.3e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 7
US-08-596-116A-68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 68, Application US/08596116A Patent No. 5721213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRANDEDNESS: single TOPOLOGY: linear MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REGISTRATION NUMBER: 28,005
REFERENCE/DOCKET NUMBER: VE
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-628-5197
TELEFAX: 202-737-3528
TELECOMMUNICATION INFORMATION:
                                                              FILING DATE: 22 MAR 1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: 3+ Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION DATA:
                                                                                                                                                                                PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FITLE OF INVENTION: No. 572121se1 reptro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         UMBER OF SEQUENCES:
                                                                                                               APPLICATION NUMBER: PCT/: FILING DATE: 29 SEP 1994 APPLICATION NUMBER: CP 24 FILING DATE: 30 SEP 1993
                                                                                                                                                                                                                                                                   COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS 6.2 SOFTWARE: WordPerfect 6.1 for Windows
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
nes 4; Conserv
             REGISTRATION NUMBER: 39,048
REFERENCE/DOCKET NUMBER: 2002/3
                                                                                                                                                                                                               APPLICATION NUMBER: US/01 FILING DATE: 30 JAN 1996
                                                                                APPLICATION NUMBER: JP 50602 FILING DATE: 22 MAR 1994
                                                                                                                                                                                                     CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                         COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OPERATING SYSTEM:
                                                NAME:
                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 RGDF 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ENGTH:
                                                                                                                                                                                                                                                                                                                                                         20036
                                                                                                                                                                                                                                                                                                                                                                                                     Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               amino acids
                                               Toffenetti, Judith L.
                                                                                                                                                                                                                                                                                                                                                                                        D.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COOPER, IVER P.
                                                                                                                                                                                                                                                                                                                                                                                                                      E: Kenyon & Kenyon
1025 Connecticut Avenue, N.W., Suite 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HAYASHI, Yoshio
KATADA, Jun
VENTION: No. 5721213el Peptides, Active as Inhibitors of
                                                                                                                                                                                                                                                                                                                                                                       USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ss: single
linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21-AUG-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Yoshimi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PC-DOS/MS-DOS
In Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              85.2%;
100.0%;
                                                                                                                                                                  PCT/JP94/01611
                                                                                                                                                                                                                                    US/08/596,116A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US/07/932,200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10:
                                                                                                                                 245541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VENTON-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1.3e+05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
```

0

```
Query Match
Best Local Similarity
---hes 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                  ; TOPOLOGY: 1:
; MOLECULE TYPE:
US-08-668-871-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-668-871-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1
Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INFORMATION FOR SEQ ID NO:
                                                                                                                                                                     TELEFAX: (201) 235-35 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOTWARE: Patentin Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                        SEQUENCE CHARACTERISTICS:
LENGTH: 4 amino acids
                                                                                                                                                                                               TELECOMMUNICATION INFORMATION: TELEPHONE: (201) 235-4205
                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTLE OF
                                                                                                                                                                                                                                                                                   FILING DATE: .
APPLICATION NUMBER:
FILING DATE: .31-AUG
                                                                                                                                                                                                                                                                                                                                                         CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STATE: New Jersey
COUNTRY: United States of America
ZIP: 07110-1199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                              REFERENCE/DOCKET NUMBER: RAN 4781/1
                                                                                                                                                                                                                                             REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                      FILING DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 RGDF 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RGDF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nutley:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4; Conservative
                                                                                                                           amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Application US/08668871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          340 Kingsland Street
                                                                                                                                      4 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Trzeciak, Arnold
/ENTION: TRI- AND TETRACYCLIC COMPOUNDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Obrecht, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mueller, Klaus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Knierzinger, Andreas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Grieder, Alfred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gerber, Fernand
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        202-429-0796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bannwarth, Wilhelm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hoffmann-La Roche
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESS:
                                                                                                                                                                                                                                                                                      ·31-AUG-1992
                                                                                            peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    peptide
                                                                                                                                                                 235-3500
235-3500
12:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  85.2%;
100.0%;
             85.2%; Score 23; DB
100.0%; Pred. No. 1.3
Live 0; Mismatches
                                                                                                                                                                                                                                                                                                 CH 2725/92
                                                                                                                                                                                                                                                                                                                             08/106,508
                                                                                                                                                                                                                                                                                                                                                                                   US/08/668,871
                                                                                                                                                                                                                                          32142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          68:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                 Version #1.25
        DB 2; Lc.
5. 1.3e+05;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1.3e+05;
hes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 4;
                                         Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
```

Conservative

Indels

0;

Gaps

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                      В
                                                                                                                                                               70
                                                                         US-08-387-749-10
                                                                                                                                                                                                                                                                          ; TOPOLOGY: 1:
; MOLECULE TYPE:
US-08-669-683-12
                            Sequence 10, Applicat Patent No. 5814460 GENERAL INFORMATION:
                                                                                                                                                                                                 Matches
                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 12, Application US/08669683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -08-669-683-12
                                                                                                                                                                                                                                                                                                                                                                    INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS:
LENGTH: 4 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                             REGISTRATION NUMBER: 32142
REFERENCE/DOCKET NUMBER: RAN 4781/1
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION: 514
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Trzeciak, TITLE OF INVENTION: NUMBER OF SEQUENCES:
 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                   1 RGDF 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: CH 2725/92 FILING DATE: 31-AUG-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RGDF 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             07110-1199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nutley
                                                                                                                                                                                                                                                                                                                       amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New Jersey
                                                           Application US/08387749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3: Hoffmann-La Roche Inc.
340 Kingsland Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Knierzinger, Andreas
Mueller, Klaus
Obrecht, Daniel
Trzeciak, Arnold
Trzeciak, Arnold TETRACYCLIC COMPOUNDS
VENTON, DUANE L. HOPFINGER, ANTON J.
                                                                                                                                                                                                                                                                                                                                                                                    (201)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        United States of America
                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bannwarth, Wilhelm
                                                                                                                                                                                                                                                                                                                                                                                                  (201)
                                                                                                                                                                                                                                                                                       peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alan
                                                                                                                                                                                                                                                                                                                                                             1) 235
235-3500
MO: 12:
                                                                                                                                                                                                               85.2%; Score 23; 100.0%; Pred. No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       08/106,508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US/08/669,683
                                                                                                                                                                                               0;
                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                 1.3e+05
                                                                                                                                                                                                                               Length 4;
                                                                                                                                                                                               Indels
                                                                                                                                                                                               0;
                                                                                                                                                                                              Gaps
                                                                                                                                                                                               0
```

```
B
                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                         ; MOLECULE TYPE: US-08-387-749-10
                                                                                                                                RESULT 11
US-08-335-832-25
                                                                                              Sequence 25, Apprin
                                                                                                                                                                                                                                                                 Query Match
Best Local (
                                                                                                                                                                                                                                                     Matches
                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                  INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                 REFERENCE/DOCKET NUMBER: VE
TELECOMMUNICATION INFORMATION:
TELEPHONE: 292-628-5197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NJMBER: US 0: FILING DATE: 14-FEB-1990 ATTORNEY/AGENT INFORMATION: NAME: COOPER, IVER P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: · 14-FEB-1991
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US 07/813,315 FILING DATE: 21-AUG-1991 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION:
                                                      APPLICANT: Dean, Richard T
APPLICANT: Lister-James, John
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE: 4
                          ITLE OF INVENTION: Technetium-99m L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US 0 FILING DATE: 21-AUG-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: PCT/
FILING DATE: 09-AUG-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US/OFFILING DATE: 21-Feb-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE:
                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                        1 RGDF
                                                                                                                                                                                                                      1 RGDF 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WASHINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                 248633
                                                                                                                  Application US/08335832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         E: BROWDY AND NEIMARK
419 SEVENTH STREET, N.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               202-737-3528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LE BRETON, GUY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               U.S.A.
                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    METHOD FOR GENERATING AND SCREENING USEFUL PEPTIDES
                                                                                                                                                                                                                                                                 85.2%;
                                         Technetium-99m Labeled Peptides for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US 07/932,200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PCT/US93/08231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US 07/480,865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PCT/US91/00891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US/08/387,749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28,005
                                                                                                                                                                                                                                                                                                                                                                                                                                 10:
                                                                                                                                                                                                                                                                 Score 23;
                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VENTON-1C
                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                    .3e+05
                                                                                                                                                                                                                                                                               Length 4;
                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                     Gaps
```

ADDRESSEE:

```
Query Match
                                                                                                                                                                    SOFTWARE: PatentIn Ver.
SEQ ID NO 20
LENGTH: 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTAL

ZIP: 60606

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

MEDIUM TYPE: IBM PC compatible

COMPART PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                    Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 20,
                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/08/753,781C CURRENT FILING DATE: 1996-12-02 NUMBER OF SEQ ID NOS: 40
                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Markland Jr., APPLICANT: Bush, Larry R
                                                                                                                                                                                                                                                                                       FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEX: 910-221-5317
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                          APPLICANT: Flores Sanchez, Eladio
OTHER INFORMATION: Description of Artificial Sequence:synthetic OTHER INFORMATION: peptide
                                                      NAME/KEY: MOD_RES
LOCATION: (1)
OTHER INFORMATION: meercaptoacetyl
                                                                                                                   FEATURE:
                                                                                                                              ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                       ITLE OF INVENTION: THROMBOLYTIC AGENTS WITH ANTITHROMBOTIC ACTIVITY ILE REFERENCE: DITI 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
NAME: No. 5925331nan, Kevin
REGISTRATION NUMBER: 35,303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER: IBM PC compate OPERATING SYSTEM: PC-DC SOFTWARE: Patentin Relaction DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCATION: 1
OTHER INFORMATION:
OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELECOMMUNICATION INFORMATION: TELEPHONE: 312-715-1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US/08/335,832 FILING DATE: 05-JAN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Illinois
                                                                                                                                                                                                                                                                                                                                                                                                                                       Application US/08753781C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3: Banner & Allegretti, Ltd.
10 South Wacker Drive Suite 3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     312-715-1234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                peptide
                                                                                                                                                                                                                                                                                                                                            Stephen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           85.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /label= ma
/note= "The amino terminus is modified by covalent
linkage to an mercaptoacetyl group."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                 Francis S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kevin E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          92,216-I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

당

```
밁
                                                                                                                                      ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 13
US-08-361-864-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                    RESULT
                                                                                                                                                                                                                                    ; MOLECULE TYPE: peptide US-08-361-864-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-753-781-20
                                                    PCT-US93-08231-10
Sequence 10, Applicat GENERAL INFORMATION: VENTON APPLICANT: VENTON APPLICANT: HOPFIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Patent No.
                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 28,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
APPLICANT: Dean, Richard T
APPLICANT: Lister-James, John
                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/07,
FILING DATE: 19921002
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                     INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER: 92
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312-715-1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                        TELEFAX: 10-2
                                                                                                                                                                                                                                                              TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                 Local Similarity
tes 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                     REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
                                                                                                                                                                                                                                                                                         LENGIH:
                                                                                                                                       1 RGDF 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 RGDF 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chicago
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Illinois
                                         Application PC/TUS9308231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Application US/08361864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                E: Allegretti & Witcoff, Ltd.
10 South Wacker Drive, Suite 3000
                                                                                                                                                                                                                                                                                         4 amino acids
                                                                                                                                                                                                                                                                                                                                                312-715-1234
                                                                                                                                                                                                                                                                                                                                                                                           HOPFINGER, ANTON J.
              VENTON, DUANE L.
                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                            85.2%; Pr
100.0%; Pr
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         85.2%; J-
100.0%; Pr/
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Agents
37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Multimeric Polyvalent Antithrombotic
                                                                                                                                                                                                                                                                                                                                                                                                                                                        US/07/955,466A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US/08/361,864
                                                                                                                                                                                                                                                                                                                                                                                                                  Kevin E
                                                                                                                                                                                                                                                                                                                                                                                        92,668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1.3e+05;
hes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 2;
                                                                                                                                                                                1.3e+05
                                                                                                                                                                                            Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 4;
                                                                                                                                                                  Indels
                                                                                                                                                                 ç,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
```

0,

```
ADHESIVE EFFECTS

NUMBER OF SEQUENCES: 27

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/527,198

FILING DATE: 21-MAY-1990

PRIOR APPLICATION UNDER: 414,144

FILING DATE: 28-SEP-1989

SEQ ID NO:12:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; LENGTH: 4 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
PCT-US93-08231-10
                                                                                                                                                                                                                                                                                                                                                         RESULT 15
5330911-12
;Patent No. 5330911
APPLICANT: HUBBELL, JEFFREY A.;MASSIA, STEPHEN P.;DESAI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ş
밁
                         Ş
                                                                                                                                                  ; LENGTH: 4
5330911-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DCS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION UMBER: PCT/US93/08231
FILING DATE:
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 4; Conserv
                                                              Query Match 85.2%; Score 23; DB Best Local Similarity 100.0%; Pred. No. 1. Matches 4; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: 202-737-3528
TELEX: 248633
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 4 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
NAME: COOPER, IVER P.
REGISTRATION NUMBER: 28,005
REFERENCE/DOCKET NUMBER: VENTONIC.PCT
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-628-5197
TELEFAX: 202-737-3528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: LE BRETON, GUY
TITLE OF INVENTION: METHOD FOR GENERATING AND SCREENING
TITLE OF INVENTION: USEFUL PEPTIDES
NUMBER OF SEQUENCES: 20
CORRESPONDENCE ADDRESS:
ADDRESSEE: BROWDY AND NEIMARK
STREET: 419 SEVENTH STREET, N.W.
                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: SURFACES HAVING DESIRABLE CELL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STATE: D C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ZIP: 20004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 RGDF 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     85.2%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 4; L
                                                                                                DB 5;
                                                                              1.3e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 4;
                                                                                                  Length 4;
                                                                  Indels
                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                0.
```

Search completed: March 6, 2001, 09:45:18

(Costo) THIS PAGE BLANK (USPTO)

and and the second of the seco

GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd

ij

```
Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Minimum DB seq length: 0 Maximum DB seq length: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being print and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query
Match Length
  2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

2000

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BLOSUM62
Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PIR_66:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   195891 seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-081-522-7
27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       March 6, 2001, 09:47:29; Search time 20.46 Seconds (without alignments)
16.594 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 RGDFV 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  pir1: *
pir2: *
pir3: *
pir4: *
  ₽B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        67900655 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gapext 0.5
A32014
B45525
PT0540
A23751
                                                                                     A25844
S39390
S47158
B617569
PT0608
PT0608
PT0700
S68326
A58728
PT0677
                                                                                                                                                                                                                                                                                                                                                                          A61445
PT0513
PT0538
PT0703
PT0670
PT0573
PT0679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            205
                                                                                                                                                                                                                                                                                    T-cell receptor antho-RFamide autho-RF amide myosin-light-cubiquitin - re
                                                                                                                                                                                                                                                                                                                                                                                                 T-cell recept
T-cell recept
                                                                                     serrawettin W
hypothetical
T-cell recept
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 T-cell recept
                                         traM protein actin I - ma
                                                                                                                                                     T-cell recept
blood cell pi
                                                                                                                                                                                                 T-cell
                                                                                                                                                                                                                                           T-cell recept
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       photosystem
fulicin - g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cholecystoki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       T-cell recept
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Description
T-cell recep
spinal cord
                       T-cell
                                                                                                                                                                                                                      T-cell
                                                                                                                                                                                                                                                                  cocoonase (E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Met-enkephal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                fulicin - gia
Leu-enkephali
                                                                                                                                                                                                 recep.
                                                                                                                                                                                                                      recept
```

	45	44	43	42	41	40	39	38	37	36	ω 5	34	ω	32	31	30
	6	σ	on.	σ	6	6	σ	σ	0	7	7	7	7	~1	~1	~1
٠	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	25.9	25.9	25.9	25.9	25.9	25.9	25.9
	4	4	4	ω	ω	w	ယ	ω	ω	տ	Çī	4	4	4	4	4
	N	N	N	N	K	N	N	N	N	N	N	N	N	N	N	N
	A25209	PL0140	A32039	S63328	PT0571	PT0636	B23751	A60898	GKHU	PT0729	PT0308	B53284	A60418	A35779	S09478	ECNK
	protein-glutamine	carbon-monoxide de	tyrosine-melanocyt	blood cell protein	T-cell receptor be	T-cell receptor be	spinal cord peptid	bursin - chicken	7	T-cell receptor be	Ig heavy chain CRD	T-cell receptor be	<pre>FMRFamide - polych</pre>	neuropeptide Antho	globulin IV alpha	cardioexcitatory n

ALIGNMENTS

RESULT 1
PTO711
T-cell receptor beta chain V-D-J region (120-2J) - mouse (fragment)
T-cell receptor beta chain V-D-J region (120-2J) - mouse (fragment)
C:Species: Mus musculus (house mouse)
C:Species: Mus musculus (house mouse)
C:Species: Nus musculus (house mouse)
C:Accession: PT0607; PT0674; PT0678; PT0570; PT0711; PT0710
R:Feeney, A.J.
J. Exp. Med. 174, 115-124, 1991
A:Title: Junctional sequences of fetal T cell receptor beta chains have few N regions A:Reference number: PT0509; MUID:91277601
A:Accession: PT0607
A:Status: translation not shown

A; Molecule type: mRNA

A;Experimental source: day 18 fetal thymus, strain BALB/c, 140-1G A;Accession: PT0678 A;Accession: PT0678 A;Residues: 1-4 <fe3> A;Recession: PT0570 A;Accession: PT0570 A;Accession: PT0570 A;Accession: PT0570 A;Status: translation not shown lin - b A;Residues: 1-4 <fe4> A;Residues: 1-6 <fe4 1-6="" 1-7="" 1-8="" <fe4="" <fe<="" a;residues:="" th=""></fe4></fe4></fe4></fe4></fe4></fe4></fe4></fe4></fe4></fe4></fe4></fe4></fe4></fe4></fe4></fe4></fe3>

δÃ

```
A;Molecule type: protein
A;Residues: 1-5 <OHT>
C;Reywords: amidated carboxyl end; D-amino acid; neuropeptide
F;2/Modified site: D-asparagine (Asn) #status experimental
F;5/Modified site: amidated carboxyl end (Val) #status experimental
                                                                                                                                                                                                                                       C;Accession: A44692
R;Ohta, N.; Kubota, I.; Takao, T.; Shimonishi, Y.; Yasuda-Kamatani, Y.; Minakata, H.; No Biochem. Biophys. Res. Commun. 178, 486-493, 1991
A;Title: Fulicin, a novel neuropeptide containing a D-amino acid residue isolated from the A;Reference number: A44692; MUID:91315471
A;Accession: A44692
                                                                                                                                                                                                                                                                                                                                                fulicin - giant African snail
C:Species: Achatina fulica (giant African snail)
C:Date: 23-Mar-1995 #sequence_revision 05-Apr-1995 #text_change 11-Jul-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C;Superfamily: gastrin
C;Keywords: amidated carboxyl end; neuropeptide
F;5/Modified site: amidated carboxyl end (Phe) #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Title: CCK-5: sequence analysis of a small cholecystokinin from canine by A;Reference number: A32516; MUID:87153871
A;Accession: A32516
A;Molecule type: protein
A;Residues: 1-5 <SHID
C;Comment: This peptide corresponds to the five carboxyl-terminal residues
                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C; Keywords:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R;Obokata, J.; Mikami, K.; Heyashida, N.; Nakamura. Plant Physiol. 102, 1259-1267, 1993
A;Title: Molecular heterogeneity of photosystem I. A;Reference number: PQ0667; MUID:94105345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Accession: PQ0689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              photosystem I 10.4K Hl chain - common tobacco (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ;Shively, J.; Reeve Jr., J.R.; Eysselein, V.E.; Ben-Avram, m. J. Physiol. 252, G272-G275, 1987;Title: CCK-5: sequence analysis of a small cholecystokini
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Residues:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Species: Nicotiana tabacum (common tobacco)
Date: 19-May-1994 #sequence_revision 19-May-1994 #text_change 17-Mar-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Accession: A32516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Date: 18-Oct-1989 #sequence_revision 18-Oct-1989 #text_change 18-Aug-2000
                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Molecule type: protein Residues: 1-5 <080>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Accession: PQ0689
                                                          Matches
                     ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ω
                                                                                                                                                                                                                                                                                                                                                                                                                                      4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DF - 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8=8
                   DFV 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          chloroplast; photosynthesis; photosystem I;
                                                      Similarity
2; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              h 44.4%;
Similarity 100.0%;
2; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
2; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                        44.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Heyashida, N.; Nakamura,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                      Score 12; DB 2;
Pred. No. 2e+05;
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 12; DB 2;
Pred. No. 2e+05;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 12;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 2;
2e+05;
                                                                                           DB 2;
                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   psaD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .
.
                                                                                         Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          thylakoid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sugiura,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   psaE, psaF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                c.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               from canine brain and inter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Vigna, S.R.; Walsh,
                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   psaH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Of:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   psaL are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cholecysto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      J.E
                                                                                                     R; Feeney, A.J.
J. Exp. Med. 174, 115-124, 1991
A;Title: Junctional sequences of fetal T cell receptor beta chains A;Reference number: PT0509; MUID:91277601
A;Accession: PT0513
A;Accession: PT0513
                                                                      A;Status: translation not shown A;Molecule type: mRNA A;Residues: 1-5 <FEE>
                                                                                                                                                                                                                        C:Species: Mus musculus (house mouse)
C:Date: 17-Jul-1992 #sequence_revision 17-Jul-1992
C:Accession: PT0513; PT0606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
"a+ches 2; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Experimental source: pedal ganglia C; Keywords: neuropeptide; opioid peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Proc. Natl. Acad. Sci. U.S.A. 81, 955-958, A;Title: Isolation and identification of en A;Reference number: A61445; MUID:84144823 A;Accession: A61445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C;Species: Mytilus edulis (blue mussel)
C;Date: 07-Oct-1994 #sequence_revision 07-Oct-1994 #text_change 21-Jan-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT
A61445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Reference number: A61445; A; Accession: B61445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C;Accession: 50144
R;Leung, M.K.; Stefano, G.B.
Proc. Natl. Acad. Sci. U.S.A. 81, 955-958, 1984
A;Title: Isolation and identification of enkeph
A;Title: Isolation and identification of enkeph
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Leu-enkephalin - blue mussel
C;Species: Mytilus edulis (blue mussel)
C;Date: 07-Oct-1994 #sequence_revision 07-Oct-1994 #text_change 21-Jan-2000
                                   A; Experimental source: A; Accession: PT0506
                                                                                                                                                                                                                                                                                T-cell receptor beta chain V-D-J region (100-4AL) -
                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                            VQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Molecule type: protein A; Residues: 1-5 < LEU>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R; Leung, M.K.; Stefano,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C; Accession: A61445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Met-enkephalin -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Experimental source: pedal ganglia C; Keywords: neuropeptide; opioid peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: protein A; Residues: 1-5 < LEU>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B61445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
nes 2; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 GGFL 5
                                                                                                                                                                                                                                                                                                                                                                           2 GGFM 5
                                                                                                                                                                                                                                                                                                                                                                                                                2 GDFV 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 GDFV 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ω
                   translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A.E.A.
type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         blue mussel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               G.B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       44.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            44.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 12;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 12;
Pred. Nc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                      strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            enkephalins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 enkephalins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 2;
2e+05;
                                                      BALB/c,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 2;
                                                                                                                                                                                                                                             #text_change 30-May-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                       1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ۳
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                        clone
                                                                                                                                                                                                                                                                                  mouse (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              αi
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          pedal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   pedal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ganglia of Mytilus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ganglia of Mytilus
                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                     have
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                   few N regions
                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
```

edu.

- 関をおかな と

```
A;Residues: 1-5 <FE2>
A;Experimental source: newborn thymus,
C;Keywords: T-cell receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                          A;Experimental source: newborn thymus, strain BALB/c C;Keywords: T-cell receptor
                                                                                                                                                       A; Title: Junctional sequences of A; Reference number: PT0509; MUID: A; Accession: PT0703
                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Title: Junctional sequences of fetal T cell receptor beta chains have few N regions. A;Reference number: PT0509; MUID:91277601
A;Accession: PT0538
A;Status: translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                           A; Molecule type: DNA
A; Residues: 1-5 <FEE>
                                                                                                                                                                                                                                                    T-cell receptor beta chain V-D-J region (135-1F) - mouse (fragment) C;Species: Mus musculus (house mouse) C;Date: 17-Jul-1992 #sequence_revision 17-Jul-1992 #text_change 30-
                                                                                                                                        A; Status: translation not shown
                                                                                                                                                                                                                    R; Feeney,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Residues: 1-5 <FE3>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R; Feeney, A.J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              I-cell receptor beta chain V-D-J region (126-1F) -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ;;Molecule type: mRNA;Residues: 1-5 <FEX;
;Residues: 1-5 <FEX;
;Experimental source: day 18 f.;Accession: PT0539
;Status: translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;Species: Mus musculus (house mouse);Date: 17-Jul-1992 #sequence_revision;Accession: PT0538; PT0539; PT0603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Experimental source: newborn thymus, strain BALB/c, Keywords: T-cell receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Molecule type: mRNA; Residues: 1-5 <FE2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Experimental source: day 18 fetal thymus, strain BALB/c, clone 126-18;
                                                                                                                                                                                                                                      Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Accession: PT0603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Status: translation
 Matches
              Query Match
Best Local
                                                                                                                                                                                                       Exp. Med. 174, 115-124, 1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Exp. Med. 174, 115-124, 1991
                                                                                                                                                                                                                                                                                                                                                               3 - 2
2 - 2
2 - 3
4 - 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 GD 3
--- 3
GD 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                      φ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity 100 2; Conservative
Similarity
2; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.08;
                                                                                                                                                                                                                                                                                                                                                                                                                                            100.08;
              100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18 fetal
                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 12;
; Pred. No.
 0
                                                                                                                                                                         fetal T cell receptor beta chains have few N regions.
91277601
                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 12;
Fred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        thymus,
                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    strain BALB/c, clone 120-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17-Jul-1992 #text_change 30-May-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      strain BALB/c,
             DB 2;
2e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 2;
2e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 2;
2e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mouse (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
 0
                                                                                                                                                                                                                                                    #text_change 30-May-1997
                                                                                                                                                                                                                                                                                                                                                                                                                               <u>,,</u>
                             Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           clone 100-2AC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
Indels
                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        clone 126-1F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ģ
                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
0
                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
0
                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
```

```
RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT
PT0573
                                                                                                                      C;Species: Mus musculus (house mouse)
C;Date: 17-Jul-1992 #sequence_revision
C;Accession: PT0679; PT0708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               T-cell receptor beta chain V-D-J region (141-1CC) - mouse (fragment)
C;Species: Mus musculus (house mouse)
C;Date: 17-Jul-1992 #sequence_revision 17-Jul-1992 #text_change 30-May-1997
                                         J. Exp. Med. 174, 115-124, 1991
A;Title: Junctional sequences of fetal T
A;Reference number: PT0509; MUID:91277601
A;Accession: PT0679
                                                                                                                                                                                                                                                                                                                                                                                                 A;Molecule type: mRNA
A;Residues: I-5 <FEE>
A;Experimental source: day 19 fetal thymus, strain
C;Keywords: I-cell receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Title: Junctional sequences of fetal T cell receptor beta chains have few N regions A;Reference number: 2T0509; MUID:91277601
A;Accession: PT0573
A;Status: translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C; Accession: PT0573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C; Keywords: I-cell receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      J. Exp. Med. 174, 115-124, 1991
A;Title: Junctional sequences of
A;Reference number: PT0509; MUID:
A;Recession: PT0690
A;Status: translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C; Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C;Species: Mus musculus (house mouse)
C;Date: 17-Jul-1992 #sequence_revision 17-Jul-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                T-cell receptor beta chain V-D-J region (140-1BD) - mouse (fragment)
A; Molecule type:
A; Residues: 1-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R; Feeney, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Experimental source: day 18 fetal thymus, strain BALB/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: DNA
A; Residues: 1-5 <FEE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R; Feeney, A.J
J. Exp. Med.
                              A; Status: translation not snown
                                                                                                       R; Feeney, A.J
                                                                                                                                                                       T-cell receptor beta chain V-D-J region -
                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
Matches 2; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                       2 GD 3
11
3 GD 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9-9
ω 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
2; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PT0690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                174, 115-124, 1991
                DNA
                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.08;
                                                                                                                                                                                                                                                                                                                      44.4%; Sc
100.0%; F
tive 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       fetal T:91277601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                       Score 12;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 12;
Pred. No.
                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                        17-Jul-1992 #text_change
                                                                           cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cell
                                                                                                                                                                          mouse (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 2;
2e+05;
                                                                                                                                                                                                                                                                                                                                     DB 2;
2e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      receptor beta chains have
                                                                           receptor beta
                                                                                                                                                                                                                                                                                                                                                                                                                     BALB/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #text_change 30-May-1997
                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                      Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                          Indels
                                                                              chains
                                                                                                                                          30-May-1997
                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                            have
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        few
                                                                              few
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        z
                                                                              z
                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      regions
                                                                            regions
```

```
A;Molecule type: protein
A;Residues: 1-4 <GRIP.
C;Comment: The function of this peptide is not known but it could act as a C;Comment: Synthetic and natural peptides had identical properties.
C;Couperfamily: RPamide neuropeptide
C;Superfamily: RPamide neuropeptide
C;Keywords: amidated carboxyl end; neuropeptide; pyroglutamic acid
F;1/Modified site: pyrrolidone carboxylic acid (Gln) #status experimental
F;4/Modified site: amidated carboxyl end (Phe) #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A:Experimental source: day 18 fetal thymus, strain BALB/c, 154-2JA:A:Accession: PT0708
A:Status: translation not -'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R;Grimmellkhuijzen, C.J.P.; Graff, D.
Proc. Natl. Acad. Sci. U.S.A. 83, 9817-9821, 1986
A;Title: Isolation of <Glu-Gly-Arg-Phe-NH2 (Antho-RFamide), a neuropeptide from sea anem A;Reference number: A26666; MUID:87092339
A;Accession: A26666
밁
                                     Ş
                                                                                                                                                                                        A;Reference number: A25844
A;Accession: A25844
A;Accession: A25844
A;Accession: A25844
A;Residues: 1-4 <GRI>
C;Reywords: amidated carboxyl end; neuropeptide;
F;1/Modified site: pyrrolidone carboxylic acid (GF;4/Modified site: amidated carboxyl end (Phe) #s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            antho-RFamide neuropeptide - sea anemone (Anthopleura elegantissima)
C;Species: Anthopleura elegantissima
C;Date: 31-Dec-1988 #sequence_revision 31-Dec-1988 #text_change 08-Dec-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Experimental source: newborn thymus, strain BALB/c, 161-2BC; Reywords: T-cell receptor
                                                                                                                                                                                                                                                                                                                                                                                                                              autho-RF amide neuropeptide - sea pansy (Renilla koellikeri)
C;Species: Renilla koellikeri (Koelliker's sea pansy)
C;Date: 21-May-1988 #sequence_revision 30-Sep-1993 #text_change 11-Jul-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Molecule type: DNA
A; Residues: 1-5 <FE2>
                                                                                                                                                                                                                                                                                                                                              A; Title: Isolation of the neuropeptide pGlu-Gly-Arg-Phe-amide from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
                                                                                                                                                                                                                                                                                                                                                                  Grimmelikhuijzen, C.J.P.; Groeger, A.
EBS Lett. 211, 105-108, 1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                 Accession: A25844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
nes 2; Conser
                                                                                    Local Similarity :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13
  1 QGRF 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 RGDF 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9=9
4
                                          RGDF 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               44.4%; Score 12; ilarity 100.0%; Pred. No. Conservative 0; Mismatc
                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          40.7%; Score 11; DB 1; 50.0%; Pred. No. 2e+05;
                                                                                                      40.7%;
                                                                                Score 11; DB 2;
Pred. No. 2e+05;
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 2;
2e+05;
                                                                                                                                                                                           le; pyroglutamic acid
(Gln) #status experimental
#status experimental
                                                                                    1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>سر</u>
• •
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 5;
                                                                                                                            Length 4;
                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>..</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                              the pennatulid Renil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     transmitter
                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ö
```

Search completed: Job time: 155 sec

March

Ó

2001, 09:47:29

```
RESULT
S39390
밁
                               δÃ
                                                                                                                                                      A; Molecule type: protein
A; Residues: 1-4 < KOM>
A; Experimental source: gizzard
C; Keywords: phosphotransferase;
                                                                                                                                                                                                                           Biochem. J. 296, 53–58, 1993
A;Title: Affinity labelling of smooth-muscle myosin light-chain kinase with 5'-[p-(f...
A;Reference number: $39390; MUID:94071841
A;Accession: $39390
                                                                                                                                                                                                                                                                                                                                  C;Species: Meleagris gallopavo (common turkey)
C;Date: 19-Mar-1997 *sequence_revision 10-Oct-1997 *text_change 07-May-1999
                                                                                                                                                                                                                                                                                                                                                                   myosin-light-chain kinase (EC 2.7.1.117), smooth muscle - turkey (fragment)
                                                                                                                                                                                                                                                                                               R; Komatsu, H.; Ikebe, M.
                                                                                                                                                                                                                                                                                                                   ; Accession:
                                                                    Matches
                                                                                    Query Match
Best Local
 2 GKF 4
                                 2 GDF 4
                                                                  Similarity
2; Conserv
                                                                                                                                                                                                                                                                                                                   S39390
                                                                    Conservative
                                                                                    40.78;
                                                                                                                                                            smooth muscle
                                                                    0;
                                                                                    Score 11;
Pred. No.
                                                                       Mismatches
                                                                                    ; DB 2;
. 2e+05;
                                                                     ij
                                                                                                     Length 4;
                                                                     Indels
                                                                     0;
                                                                     Gaps
                                                                       0
```

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           윷
                                                                                                                                                                                                                                                                                                                                                                         Database
                                                                                                                                                                                                                                                                                                                                                                                         Post-processing: Minimum Match
Maximum Match
Listing first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Total number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Searched
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        음
                                                                                                                                                                                                                                                                                                                                           score greater
                                                                                                                                                                                                                                                                                                                                                                                                                                B B
                                                                                                                                                                                                                                                                                    Score
                                                                                                                                                                                                                                                                                                                                   S,
                                                                                                                                                                                                                                                                                                                                                                                                                               seq
                                                                                                                                                                                                                                                                                                                                                      ŏ.
                                                                                                                                                                                                                                                                                                                                greater than or equal to the score of the result being derived by analysis of the total score distribution
                                                                                                                                                                                                                                                                                                                                                                                                                                                             0f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                               length:
length:
                                                                                                                                                                                                                                                                                   Query
Match
                                                                                                                                                                                                                                                                                                                                         is the number of results predicted by chance to have a ater than or equal to the score of the result being printed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-081-522-7
27
1 RGDFV 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BLOSUM62
Gapop 10.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              88757 seqs, 32294092 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        March
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Copyright
                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2001, 09:48:22 ; Search time 12.72 Seconds (without alignments)
12.694 Million cell updates/sec
    υνυν 44ωω44444υνυνυν αυνατουθών
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GenCore version (c) 1993 - 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gapext
                                                                                                                                                                                                                                                                                                                                                                                          0%
100%
45 SI
                                                                                    GRWM_HUMAN
LUXE_VIBFI
ACHL_ACHUJ
DCML_PSECH
EOSI_HUMAN
FAR3_HIRME
FAR4_HIRME
AL14_CARWA
BIOA_CITFR
BIOA_SALTY
FAR2_ARTTR
SUGA_ACHDO
UC22_MAIZE
                                                          UF01_MOUSE
TUFT_HUMAN
BIOB_SALTY
                                                                                                                                                                                                                 FLRF_HIRNE FMRF_MACNI
                                       PRCT_PERAM
RM01_YEAST
  BPP7_BOTIN
THYL_PIG
BIOB_CITER
                                                                                                                                                                                                                                                                                   Ħ
                                                                                                                                                                                                                                                                                                                                                                                           summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                               SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                            28
                                                                                                                                                                                               P24272 vibrio
                                                                                                                                                                                                                                                     P38005 chlamydia
P54714 canis fam
                                                                                                                                                                                                                                                                                  Description
                                                                                             7.salmonella
3 artioposthi
1 acheta dome
saccharomyc
speudomonas
bothrops in
sus scrofa
citrobacter
                                                                  B zea mays (m
mus musculu
homo sapien
                                                                                                                                             homo sapien
hirudo medi
hirudo medi
                                                           salmonella
                                                                                                                                                                                    achatina fu
                                                                                                                                                                                                       homo sapien
                                                                                                                                                                                                                 macrocallis
                                                                                                                                                                                                                          escherichia
hirudo medi
                                                                                                                           carcinus ma
                                                                                                                                                                                                                                             canis famil
pardachirus
```

ALIGNMENTS

Š

4

= =

Query Match Best Local S Matches 2

Similarity 2; Conserv

37.0%; Silarity 100.0%; 1 Conservative 0;

Score 10; Pred. No.

Length 5;

Mismatches

Indels

0;

0,

```
RESULT 1

UXA4_CHLTR
ID. UXA4_CCHLTR
AC CHLTR
AC P38005;
DT 01-CCT-1994 (Rel. 30, Created)
DT 01-CCT-1994 (Rel. 30, Last sequence update)
DT 01-CCT-1994 (Rel. 30, Last sequence update)
DT 01-CT-1994 (Rel. 30, Last annotation update)
DT 01-CCT-1994 (Rel. 30, Last sequence update)
DT 01-CCT-1994 (Rel. 30, Created)
DT 01-CCT-1994 (Rel. 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT
TPIS_CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                    Query Match
Best Local S
Matches 2
                                                                                                                                                                                                                            dog heart proteins.";
Electrophoresis 18:2795-2802(1997).
Electrophoresis 18:2795-2802(1997).
C-1- CATALYTIC ACTIVITY: D-GLYCERALDEHYDE 3-PHOSPHATE = DIH
ACETONE PHOSPHATE.

-1- PATHWAY: PLAYS AN IMPORTANT ROLE IN SEVERAL METABOLIC
C-1- SUBUNIT: HOMODIMER (BY SIMILARITY).

-1- SIMILARITY: BELONGS TO THE TRIOSEPHOSPHATE ISOMERASE F
HSC-2DPACE; 254714; DOG.
R HSC-2DPACE; 254714; DOG.
R PROSITE; PS00171; TIM; PARTIAL.

ISOMERASE; GlyColysis; Gluconeogenesis; Fatty acid biosynt
                                                                                                                            Pentose shunt.

NON_TER 1

NON_TER 5

SEQUENCE 5 AP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TPIS_CANFA
P54714;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE.
TISSUE-HEART;
TISSUE-HEART;
MEDLINE-98163349; PubMed-9504812;
Dunn M.J., Corbett J.M., Wheeler C.F.
THSC 2DPAGE and the two-dimensional
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence update)
15-JUL-1998 (Rel. 36, Last annotation update)
TRIOSEPHOSPHATE ISOMERASE (EC 5.3.1.1) (TIM)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted (SEP-1994) to the SWISS-PROT data bank.
1: MISCELLANEOTS: ON THE 2D-GEL THE DETERMINED PI
PROTEIN IS: 4.5, ITS MW IS: 28 KDA.
NON_TER 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Canis familiaris (Dog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Carnivora; Fissipedia; Canidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Chlamydia trachomatis.
Bacteria; Chlamydiales; Chlamydiaceae; Chlamydia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8=8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  h 44.4%; Score 12; DB Similarity 100.0%; Pred. No. 8. 2; Conservative 0; Mismatches
                                                                                                                                 ¥ 5 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                    550
                                                                                                                                                              OT P
                                                                                                                                    ₩;
                                                                                                                                                                                                                                                                                                                                 THE TRIOSEPHOSPHATE ISOMERASE FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 75BAA865AA800000 CRC64
                                                                                                                                    64444862C9A00000 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ή.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gel
DB 1; Lc.
3. 8.9e+04;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 1; 20
3. 8.9e+04;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ហ
                                                                                                                                                                                                                                 Fatty acid biosynthesis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               electrophoresis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (FRAGMENT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sanchez-Campillo Vtretou E., Ratti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BODY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 5;
                                                                                                                                                                                                                                                                                                                                                                                     METABOLIC PATHWAYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ဝှု
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Euteleostomi; Canis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             THIS UNKNOWN
                                                                                                                                                                                                                                                                                                                                                                                                                                       DIHYDROXY-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of.
```

밁

٣V

N

```
T PAR PROCESS OF THE PAR PROCESS
  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
.Best Local S
Matches 2
                                                                                    SEQUENCE FROM N.A.

MEDLINE-88227859; PubMed-2836369;
Inamoto S., Yoshioka Y., Ohtsubo E.;
Indentification and characterization of the products and tray genes of plasmid R100.";
J. Bacteriol. 170:2749-2757(1988).
-!- FUNCTION: TRANSFER GENE PROTEIN. IS INVOLVED IN T PROCESS OF BACTERIAL CELLS FOR THE EXCHANGE OF PL-!- SUBCELLULAR LOCATION: CYTOPLASMIC.
-!-, SIMILARITY: TC TRAM PROTEIN OF OTHER PLASMIDS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P81864;
30-MAY-2000 (Rel. 39
30-MAY-2000 (Rel. 39
01-OCT-2000 (Rel. 40
PARDAXIN II (PXII)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-JAN-1990
01-JAN-1990
15-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PARMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TRM3_ECOLI
P13973;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tazarovici P., Primor N., Loew L.M.;
"purlication and pore-forming activity of two hydrophobic polypeptides from the secretion of the Red sea moses sole (Pardachi marmoratus).";
J. Biol. Chem. 261:16704-16713(1986).
J. Biol. Chem. 261:16704-16713(1986).
T. FUNCTION: EXHIBITS UNUSUAL SHARK REPELLENT AND SURFACTANT PROPERTIES. FORMS VOLCAGE-DEPENDENT, ION-PERMEABLE CHANNELS IN MEMBRANES, AT HIGH CONCENTRATION CAUSES CELL MEMBRANE LYSIS.
T. SUBUNIT: MONOMER. IN AQUEOUS SOLUTION EXISTS AS A TETRAMER.
T. SUBCELLULAR LOCATION: SECRETED.
TO SUBCELLULAR LOCATION: SECRETED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pardachirus marmoratus (Red sea moses sole).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Pleuronectiformes;
Soleoidei; Soleidae; Pardachirus.
                      This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN
                                                                                                                                                                                                                                                                                                                                                                             Plasmid IncFII R100.
Bacteria; Proteobacteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ECOLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE=SKIN SECRETION;
MEDLINE=87057369; PubMed=3782138;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PAP2_PARMA
                                                                                                                                                                                                                                                                                                                                                                                                                                  Escherichia coli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                               Escherichia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GDF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ŋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (Rel. 13, Created)
(Rel. 13, Last sequence up
(Rel. 37, Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ₿ 5
Swiss Institut
Bioinformatics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STANDARD;

    Created)
    Last sequence up
    Last annotation

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (FRAGMENT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           33.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          M.
                                                                                                                                                                                                                                                                                                                                                                                  gamma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7769C9C9C8100000 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                  subdivision;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     update)
on update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ū
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9e+04;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sea moses sole (Pardachirus
                                                                                                                                                                                                                                       products
                                                                                                                                                                                                                                                                                                                                                                                  Enterobacteriaceae;
are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                 OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
00
                                                                                                                                           N THE CONJUGATION PLASMID DNA.
                                                                                                                                                                                                                                          from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5;
restrictions
                      EMBL
                      a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
ဝ္ဗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
RESULT
FLRF_H
                                                                                                                                                       RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SSACCOCC
         SO CCC RTT A RAC RC RTT A RAC CCC RTT A RAC RTT A 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 1
                                                                                                                                                                                                                                                                                                                                                                                     Neuropeptide; i
MOD_RES '
SEQUENCE 4 AI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conjugation;
NON_TER
SEQUENCE 5
                        FMRF_MACNI

P01162;

21-JUL-1986 (R

21-JUL-1986 (R

15-JUL-1998 (R

FMRFAMIDE (PEA

MACCICCALLISTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-NOV-1995
01-NOV-1995
01-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           use by modified
                                                                                                                                                       LT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FLRF_HIRME
P42561;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Peptides
[2]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HIRME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         entities re
or send an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE-92195954; PubMed-1686933;
Evans B.D., Pohl J., Kartsonis M.A., Cale
"Identification of Remide neuropeptides
Peptides 12:897-908(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hirudo medicinalis (Medicinal leech), and Helisoma tr.
Eukaryota; Metazoa; Annelida; Clitellata; Hirudinida;
Arynchobdellida; Hirudiniformes; Hirudinidae; Hirudo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; M20941; -; PIR; A32014; A32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Madrid K.P., Price FMRFamide-related
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SPECIES-H.TRIVCIVIS; TISSUE-KIDNEY; MEDLINE-94286417; PubMed-7912428;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE.
SPECIES=H.MEDICINALIS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FLRFAMIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Peptides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 KND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 RGD
                                                                                                                                                                                                                              ш
                                                                                                                                                                                                                                                                4 FV 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SIMILARITY: BELONGS
                                                                                                                                                                                                                              FF --
         allista nimbosa
medicinalis (Ma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1; Conserv
                                                                                                                                                                                                                                N
                                                                                                                                                                                                                                                                                                1; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             non-profit
and this st
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15:31-26(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            requires
                                             (PEAK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       nd this statement is not remo equires a license agreement ( email to license@isb-sib.ch)
(Rel. 01, Created)
(Rel. 01, Last sequence update)
(Rel. 36, Last annotation update)
(PEAK C) (CARDIOEXCITATORY NEUROPEPTIDE).

The nimbosa (Sun-ray Clam), Nereis vitens

The nimbosa (Sun-ray Clam), and Helisoma t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (Rel.
(Rel.
(Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; -; NOT_ANNOTATED_CDS
A32014.
Plasmid; DNA-binding.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ΑA.
                                                                                                                                                                                                                                                                                                                                                                                           AA:
                                                                                                                                                                                                                                                                                                                                                                                                                               Amidation.
                                                                                                                                      STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  32,
                                                                                                                                                                                                                                                                                                                                                                                           582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 634 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       D.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      peptides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  institutions as long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         33.3%;
                                                                                                                                                                                                                                                                                                                       50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Created)
                                                                                                                                                                                                                                                                                                                                                                                           X.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Last sequence up
                                                                                                                                                                                                                                                                                                                     . 09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   o.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Greenberg
                                                                                                                                                                                                                                                                                                Pred. No. 8.9e
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                         AMIDATION.
69D40729A0000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6B1B1AA443500000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 8; DB 1
Pred. Nc. 8.9e
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ۲;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FARP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    / м.J., Kha
he kidney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             removed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  update)
on update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (FMRFAMIDE RELATED PEPTIDE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Calabrese R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (See
                                                                                                                                                                                                                                                                                                                     в 1;
.9e+04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Khan F
ney of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         в 1;
.9е+04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        http://www.isb-sib
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  its content
                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R.L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .
R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      medicinal leech.";
                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               trivolvis (Snail).
da; Hirudinea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Saleuddin A.S.
;nail, Helisoma
                            (Sandworm)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                  0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A.S.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                    0;
```

(Snail).

.....

100 mm

```
RESULT 7
GRWM_H
FID GRWM_H
FO1157
DT 21-UUL
DT 21-UUL
DT 21-UUL
DE GROWTH
OS HOMO S
OC Eukary
OC Mammal
RN [1]
RP SEQUEN
                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                        STARRCCCCCCCTTTREXXCTRECTREXXCTRECTREXXCTRECTREXXCTRECTREXXCC
                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                      21-JUL-1986 (Rel. 0
21-JUL-1986 (Rel. 0
21-JUL-1986 (Rel. 0
21-JUL-1986 (Rel. 0
GROWTH-MODULATING F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SPECIES-H.MEDICINALIS;
MEDLINE-92195954; Pubmed-1686933;
Evans B.D., Pohl J., Kartsonis M.A., Cala
"Identification of RFamide neuropeptides
Peptides 12:897-908(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SPECIES-H.TRIVOLVIS; TISSUE-KIDNEY; MEDLINE-94286417; PubMed-7912428; Madrid K.P., Price D.A., Greenberg M.J., Kha FARFamide related peptides from the kidney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SPECIES-N.VIRENS;
MEDLINE-90259866; PubMed-2342992;
Krajniak K.G., Price D.A.;
*Authentic fMXFamide is present in
Peptides 11:75-77(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PIR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Price D.A., Greenberg M.T.; "Structure of a molluscan c Science 197:670-671(1977).
                                                     Eukaryota;
                                                                                                                                                            GRWM_HUMAN P01157;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Price D.A., Greenberg M.J.,
"purification and characterization of
from the central ganglia of a bivalve
Prep. Biochem. 7:261-281(1977).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE, AND CHARACTERIZATION.
SPECIES=M.NIMBOSA; TISSUE=GANGLION;
MEDLINE=78012038; PubMed=909875;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SPECIES-M.NIMBOSA;
       SEQUENCE
                                       Mammalia;
                                                                       Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                        Neuropeptide;
MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     trivolvis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Mollusca; Bivalvia; Heteroconchia; Veneroida;
Veneroidea; Veneridae; Macrocallista.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE-77215956;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EQUENCE,
                                                                                                                                                                                                                                                                    _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             tides 15:31-36(1994).
FUNCTION: MYOACTIVE: CARDIOEXCITATORY SUBSTANCE.
ACTIVITIES INCLUDE AUGMENTATION, INDUCTION, AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CARDIAC CONTRACTION.
SIMILARITY: BELONGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A01426;
A60418;
                                                                                                                                                                                                                                                                    꽃..
                                                                                                                                                                                                                                                                                                   ۲
                                                                                                                                                                                                                                                                    N
                                                                                                                                                                                                                                                                                                                                                     Similarity
                                     ; Metazoa;
Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AND
                                                                                                                                                                                                                                                                                                                                   25.9%;
illarity 50.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ECNK.
A60418.
                                                                                                                                                                                                                                                                                                                                                                                                                        Ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Amidation.
                                                                                                                                                                              STANDARD;

    Created)
    Last sequence update)
    Last annotation update)
    PEPTIDE.

                                                                                                                                                                                                                                                                                                                                                                                                                        600 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; TISSUE-CEREBRAL PEDAL, PubMed-877582;
                                     Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cardioexcitatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              THE
                                                                                                                                                                                                                                                                                                                                 Score 7; DB 1
Pred. No. 8.9e
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                      AMIDATION.
69D40699A0000000 CRC64;
                                     Craniata; Vertebrata; Catarrhini; Hominidae
                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FARP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (FMRFAMIDE RELATED PEPTIDE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Calabrese R.L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a cardioexcitatory neuropeptide
mollusc.";
                                                                                                                                                                                                                                                                                                                                                   DB 1;
8.9e+
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           polychaete Nereis virens.";
                                                                                                                                                                                                                                                                                                                              3.9e+04;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Khan H.R., Saleud ney of the snail,
                                                                                                                                                                            ጅ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         neuropeptide.";
                                                                                                                                                                                                                                                                                                                                                                    Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VISCERAL GANGLION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          medicinal leech.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REGULARIZATION O
                                                     Euteleostomí;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Saleuddin A.S.M.;
snail, Helisoma
                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                   0
RESULT 9
ACH1_ACHFU
ID ACH1_ACEFU
                                                                                                                                                                                                                                             IUXE_VIBFI
ID LUXE_I
DI LUXE_I
AC P2427_
DI 01-MAN
DI 01-MAN
DI 01-MAN
DI 01-MC
DE LONG-(
CACYL-
GN LUXE
GN LUXE
GN VIBRIE
GN VIBRIE
GN SEQUE
RN SEQUE
RN SART
RA NA RIT
RA SART
RA "A nart
RT J Bac
CC -1- PA
                                                                                        밁
                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S D C C C P B B R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 1
                                                                                                                                                                         Query Match
Best Local :
                                                                                                                                                          Matches
                                                                                                                                                                                                                                             Luminescence;
NON_TER
SEQUENCE 3 }
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LUXE_VIBFI P24272;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PIR; A014
SEQUENCE
                                                                                                                                                                                                                                                                                                 EMBL; M62812;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Swartzman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bacteria;
                                                                                        ω
                                                                                                                      ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N
                                                                                                                      D
3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPLEX.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ်
ပေ
                                                                                        σ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  റ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N
                                                                                        ω
```

```
Schlesinger D.H., Pickart L., Thaler M.M.;
"Growth-modulating serum tripeptide is glycyl-histidyl-lysine.";
Experientia 33:324-235(1977).
-i- MISCELLANEOUS: THIS SERUM TRIPEPTIDE HAS BEEN FOUND TO STIMU
GROWTH OF SOME CELL TYPES AND TO INHIBIT OTHER TYPES IN VITR
                                                                                                                                                          the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed. entities requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-MAR-1992 (Rel. 21, Created)
01-MAR-1992 (Rel. 21, Last sequence update)
01-CCT-1996 (Rel. 34, Last annotation update)
LONG-CHAIN-FATTY-ACID--LUCIFERIN-COMPONENT LI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Vibrio fischeri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE-77162369;
Schlesinger D.H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=91072226;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (ACYL-PROTEIN SYNTHETASE) (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                             te for the lux operon.",
Bacteriol. 172:6797-6802(1990).
Bacteriol. 172:6797-6802(1990).
FUNCTION: ACYL-PROTEIN SYNTHETASE ACTIVATES TETRAL
IT IS A COMPONENT OF THE FATTY ACID REDUCTASE COME
FOR CONVERTING TETRADECANOIC ACID TO THE ALDEHYDE
SUBSTRATE IN THE LUCIFERASE-CATALYED REACTION.
CAPALYTIC ACTIVITY: ATP + AN ACID + PROTEIN - AMP
+ AN ACYL-PROTEIN THIOLESTER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  new Vibrio fischeri lux gene
                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
1; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Proteobacteria;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                    ₽,
                                                                                                                                                                                                                                                                                                                                SECOND STEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GKHU.
                                                                                                                                          .:
                                                                                                                    Ligase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                      NOT_ANNOTATED_CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             340
                                                                                      374 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PubMed=2254256;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PubMed=858356;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22.2%,
100.0%; Pr
                 22.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MW;
                                                                                                                                                                                                                                                                                                                                IN THE BIOLUMINESCENT FATTY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gamma subdivision;
                                                                                      6AA3303000000000 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6331E81000000000 CRC64;
 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 6; DB 1: Pred. No. 8.9
0; Mismatches
                 Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Thaler
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A.F.,
 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     precedes
       e 6;
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ν 6;
ΝΟ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Meighen E.A.;
des a bidirectional
                 DB 1; Ler
). 8.9e+04;
                                                                                                                                                                                                                     There are no restrictions ng as its content is in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1; Le
                                                                                                                                                                                      . Usage by and for commercial http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LIGASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Vibrionaceae; Vibrio
 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                   TETRADECANOIC ACID. SE COMPLEX RESPONSIBLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (EC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
 Indels
                                  ω
                                                                                                                                                                                                                                                                                                                               ACID
                                                                                                                                                                                                                                                                                                                                                                   + PYROPHOSPHATE
                                                                                                                                                                                                                                                                                                                                                                                                   WHICH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6.2.1.19)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         termination
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IN VITRO
                                                                                                                                                                                                                                                            EMBL
                                                                                                                                                                                                                                                                                                                                REDUCTASE
                                                                                                                                                                                                                                                            a collaboration -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STIMULATE
0;
                                                                                                                                                                                                                                                                                                                                                                                                 SERVES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                   AS
                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                          o
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

STANDARD;

PRT;

B

```
RESULT DCML_PS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밇
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOT WELL COCCURRED BY A REAL PROPERTY OF SOME SOURCE SOURC
   ACCCCC RTT RANGE OF THE RESERVE OF T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ishida T., In Y., Doi M., Inoue M., Yas. Iwashita T., Nomoto K.;
"Crystal structure and molecular conform (H-GlyD-phe-Ala-Asp-OH), an endogenous D-amino acid residue.";
Int. J. pant part parts.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    P35904;
01-JUN-1994
01-JUN-1994
15-JUL-1998
                                                                                                                                                                                                                                                                                                                                  DCML_PSECH
P19916;
01-FEB-1991
01-FEB-1991
01-DEC-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fujimoto K., Kubota I., Yasuda Kamatani Y., Minakata Fujimoto K., Kubota I., Yasuda Kamatani Y., Minakata Yoshida M., Harada A., Muneoka Y., Kobayashi M., "Purification of achatin-I from the atria of the Afri Achatina fulica, and its possible function.", Biochem. Biophys. Res. Commun. 177:847-853(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CHARACTERIZATION.
STRAIN-FERUSSAC; TISSUE-HEART ATRIUM;
MEDLINE-91264856; PubMed-1675568;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kamatani Y., Minakata H., Kenny P.T.M., Iwashita T., Wa
Funase K., Sun X.P., Yongsiri A., Kim K.H., Novales-Li
Novales E.T., Kanapi C.G., Takeuchi H., Nomoto K.;
"Achatin-I, an endogenous neuroexcitatory tetrapeptide
fulica Ferussac containing a D-amino acid residue.";
Biochem. Biophys. Res. Commun. 160:1015-1020(1989).
                                                                                                                                                                                                                                                                                                     01-FEB-1991 (Rel. 17, Created)
01-FEB-1991 (Rel. 17, Last sequence
01-DEC-1992 (Rel. 24, Last annotation carbon MONOXIDE DEHYDROGENASE LARGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PIR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN-FERUSSAC; TISSUE-GANGLION; MEDLINE-89273551; PubMed-2597281;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Achatina fulica (Giant African
Eukaryota; Metazoa; Mollusca; (
MEDLINE-90055678; PubMed-2818128;
Kraut M., Hugendieck I., Herwig S.
"Homology and distribution of Code
carboxydotrophic bacteria.";
Arch. Microbiol. 152:335-341(1989)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PSECH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Achatinacea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACHATIN-I
                                                                                                                                                                                                                                                                            Pseudomonas
                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                  3acteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity hes 1; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          . J. Pept. Protein Res. 39:258-264(1992)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NEURON (PON); ALSO EN
HEART BEAT. HAS ALSO
A32480; A32480.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FUNCTION: NEUROEXCITATORY PEPTIDE; INCREASES THE IMPUISE FREQUENCY AND PRODUCES A SPIKE BROADENING OF THE IDENTIFIED HEART EXCITATORY NEURON (PON); ALSO ENHANCES THE AMPLITUDE AND FREQUENCY OF THE HEART BEAT. HAS ALSO AN EFFECT ON SEVERAL OTHER MUSCLES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ଦ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ດ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             D-amino acid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CHARACTERIZATION,
                                                                                                                                                                                                                                                  Proteobacteria.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (Rel.
(Rel.
(Rel.
                                                                                                                                                                                                                                                                         carboxydohydrogena
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ₽,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Achatinidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        36,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       408 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Created)
Last sequence Last anno
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sequence update) annotation updat
                                                                                                                                                                                                                                                                                                                                        sequence update) annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    D-PHENYLALANINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 6; DB 1
Pred. No. 8.9
0; Mismatches
   H(2)0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gastropoda;
                                                                                                                         s;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SYNTHESIS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      conformation
                                                                                         dehydrogenase
   +
                                                                                                                                                                                                                                                                                                        con update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Yasuda-Kamatani Y.,
                                                                                                                         Meyer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 1; LC., 40. 8.9e+04; 0;
   ACCEPTOR -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             neuropeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pulmonata;
                                                                                                                         0.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      of.
                                                                                                                                                                                                                                                                                                            1.2.99
                                                                                            structural
   CO(2) +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          achatin-I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      African
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               H:,
                                                                                                                                                                                                                                                                                                            .
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          containing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Watanabe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Stylommatophora,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     from
   REDUCED
                                                                                                                                                                                                                                                                                                            (FRAGMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Minakata
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   giant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nomoto
                                                                                         genes
                                                                                                                                                      $.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>ج</u>
                                                                                            ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ξ.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

```
RESULT
EOSI_HU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RA RROCCOS DIT DAC
                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         anaphylaxis.";

Arad. Sci. U.S.A. 72:4123-412/\.

Proc. Natl. Acad. Sci. U.S.A. 72:4123-412/\.

(AND OTHER TISSUES) DOZING HYPERSENSITIVITY REACTIONS
(ANAPHYLAXIS). THEIR ACTIVITIES, PREFERENTIALLY AFFECTING
EOSINOPHILS, INCLUDE CHEMOTAXIS, CHEMOTACTIC DEACTIVATION
EOSINOPHILS, INCLUDE CHEMOTAXIS, CHEMOTACTIC DEACTIVATION
EOSINOPHILS, INCLUDE CHEMOTAXIS, CHEMOTACTIC DEACTIVATION

EOSINOPHILS, INCLUDE CHEMOTAXIS, CHEMOTACTIC DEACTIVATION

EOSINOPHILS, INCLUDE CHEMOTAXIS, CHEMOTACTIC DEACTIVATION

EOSINOPHILS, INCLUDE CHEMOTAXIS, CHEMOTACTIC DEACTIVATION

EOSINOPHILS, INCLUDE CHEMOTAXIS, CHEMOTACTIC DEACTIVATION

EOSINOPHILS, INCLUDE CHEMOTAXIS, CHEMOTACTIC DEACTIVATION

EOSINOPHILS, INCLUDE CHEMOTAXIS, CHEMOTACTIC DEACTIVATION

EOSINOPHILS, INCLUDE CHEMOTAXIS, CHEMOTACTIC DEACTIVATION

EOSINOPHILS, INCLUDE CHEMOTAXIS, CHEMOTACTIC DEACTIVATION

EOSINOPHILS, INCLUDE CHEMOTAXIS, CHEMOTACTIC DEACTIVATION

EOSINOPHILS, INCLUDE CHEMOTAXIS, CHEMOTACTIC DEACTIVATION

EOSINOPHILS, INCLUDE CHEMOTAXIS, CHEMOTACTIC DEACTIVATION

EOSINOPHILS, INCLUDE CHEMOTAXIS, CHEMOTACTIC DEACTIVATION

EOSINOPHILS, INCLUDE CHEMOTAXIS, CHEMOTACTIC DEACTIVATION

EOSINOPHILS, INCLUDE CHEMOTAXIS, CHEMOTACTIC DEACTIVATION

EOSIN PROCESSION 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Purification and synthesis of eo:
human lung tissue: identification
anaphylaxis.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21-JUL-1986 (Rel. 0
21-JUL-1986 (Rel. 0
21-JUL-1986 (Rel. 0
EOSINOPHILOTACIIC E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         _HUMAN
EOSI_HU
P02731;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Oxidoreductase;
NON_TER 4
SEQUENCE 4 AA;
                                                                                                                                                                                                                           LT 12
HIRME
                                                                                  01-NOV-1995 (Rel. 32, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
01-NOV-1995 (Rel. 32, Last annotation update)
01-NOV-1995 (Rel. 32, Last annotation update)
FMRFAMIDE-LIKE NEUROPEPTIDE YLRF-AMIDE.
Hirudo medicinalis (Medicinal leech).
Eukaryota; Metazoa; Annelida; Clitellata; Hirudinida;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PIR; A0:
VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PIR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ++
MEDLINE-92195954;
Evans B.D., Pohl;
                                  SEQUENCE
                                                                                                                                                                                         P42562;
                                                                                                                                                                                                             FAR3_HIRME
                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens (Human)
Eukaryota; Metazoa; (
                                                                  Arynchobdellida;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mammalia;
                                                                                                                                                                                                                                                                                                 N
                                                                                                                                                                                                                                                                                                                                N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 G 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCEPTOR.
COFACTOR:
SUBUNIT: C
SMALL.
SMALL:
                                                                                                                                                                                                                                                                                                                                ٠
۵
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ര -
                                                                                                                                                                                                                                                                                                 a -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAMCH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N
                                                                                                                                                                                                                                                                                                   N
                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; Metazoa; Chordata;
Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           4
                                                                                                                                                                                                                                                                                                                                                                  22.2%;
ilarity 100.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22.2%; Silarity 100.0%; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ETHUL.
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PL0140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CONSISTS OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Molybdenum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01, Last
01, Last
PEPTIDES.
 ٠,
                                                                      Hirudiniformes;
 PubMed=1686933;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        441 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             L
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Œ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Created)
                                                                                                                                                                                                                                                                                                                                                                                      .0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             THREE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sequence up
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7761E876F0000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                       V -> A (IN OTHER PEPTIDE)
/FTId=VAR_005201.
6E05B862A0000000 CRC64;
                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of eosinophilotactic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 6; DB 1
Pred. No. 8.9
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                    Score 6; DB : Pred. No. 8:90; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             POLYPEPTIDE
                                                                        Hirudinidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         e 6;
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      on update)
     Calabrese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .
8.
8.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3 1;
8.9e+04;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A
                                                                                                                                                                                                               A
                                                                                                                                                                                                                                                                                                                                                                                      1; Lei
.9e+04;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CHAINS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CRC64;
                                                                        Hirudo
                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  chemotactic factor
                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LARGE,
                                                                                                                                                                                                                                                                                                                                                                                                        4;
                                                                                          Hirudinea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CELLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDIUM,
                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LUNG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Of.
                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

.; .

```
RESULT 13
 CREE RANK REPROCESSED TO THE
                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STECCET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 1
                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                           Matches
                                                                                                                                    30-MAY-2000 (Rel. 30-MAY-2000 (Rel. 30-MAY-2000 (Rel. 30-MAY-2000 (Rel. 30-MAY-1000) (Rel. 30-MAY-1000)
                                                                                           Eukaryota; Metazoa; Arthropoda; Crustacea; Malaco
Eumalacostraca; Eucarida; Decapoda; Pleocyemata;
Eubrachyura; Portunoidea; Portunidae; Carcinus.
                                                                                                                                                                           AL14_CARMA
P81817;
                                                                                                                                                                                                                                                                                                                                                            MEDLINE-92195954; PubMed-1686933;
Evans B.D., Pohl J., Kartsonis M.A., Calabrese
"Identification of RFamide neuropeptides in the
Peptides 12:897-908(1991).
-i- SIMILARITY: BELONGS TO THE FARP (FMRFAMIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                 Hirudo medicinalis (Medicinal leech).
Eukaryota; Metazoa; Annelida; Clitellata; Hir
Arynchobdellida; Hirudiniformes; Hirudinidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOD_RES
         "Isolation and identification of multi-
allatostatin superfamily in the shore
Eur. J. Biochem. 250:727-734(1997).
                                                                                                                                                                                               CARMA
                                                                                                                                                                                                                                                                                                                        Neuropeptide; Amidation.
MOD_RES 4 4
SEQUENCE 4 AA; 616 MW
                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-NOV-1995 (Rel. 32, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
01-NOV-1995 (Rel. 32, Last annotation update)
FMRFAMIDE-LIKE NEUROPEPTIDE YMRF-AMIDE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Identification of RFamide Peptides 12:897-908(1991).
-i- SIMILARITY: BELONGS TO FAMILY.
                                              TISSUE-CEREBRAL G
MEDLINE-98121193;
Duve H., Johnsen
                                                                                                                           Carcinus maenas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Neuropeptide; Amidation.
                                      Thorpe A.;
                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FAR4_HIRME
P42563;
                                                                                                                                                                                                                                                       4 F 4
                                                                                                                                                                                                                                                                                                                                                       FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ħ
                                                                                                                                                                                                                                     퍾.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'n
                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4
                                                                                                                                                                                                                                                                         22.2 illarity 100. Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ₽,
                                                                                                                                                                                     STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                        GANGLION, AND THORACIC 3; PubMed=9461295;
                                                                                                                           (Common shore
                                               A.H.,
                                                                                                                                             39,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22.2%;
                                                                                                                                             Last
Last
                                                                                                                                                                                                                                                                                                                           MW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Z.
                                                                                                                                                                 Created)
 AS
                                               Maestro
                                                                                                                                                                                                                                                                                    .2%;
0.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .08;
A NEUROTRANSMITTER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          THE
                                                                                                                                             sequence up
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            neuropeptides in
                                                                                                                                                                                                                                                                                                                        AMIDATION.
69D4068B30000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AMIDATION.
69D4073B30000000
                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                          Score 6; DB 1
Pred. No. 8.9
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score
Pred.
                  of multiple neuropeptides of he shore crab Carcinus maenas
                                                                                                                          crab) (Green
                                                                                                                                                                                     FRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FARP
                                              J.-L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       . No.
                                                                                                                                                       update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (FMRFAMIDE
                                              Scott
                                                                                                                                              update)
                                                                  GANGLION;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .
BB
                                                                                                                                                                                     G
                                                                                                                                                                                     ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1; Le
                                                                                                                                                                                                                                                                                    1;
.9e+
                                                                                                                                                                                                                                                                                                                                                                                                                                   Hirudinida;
dae; Hirudo.
                                                                                                                 crab).
Malacostraca;
                                             A.G.,
 ဓ္က
                                                                                                                                                                                                                                                                                                                         CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CRC64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the medicinal leech.";
                                                                                                                                                                                                                                                                                                                                                                                    the
                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
NEUROMODULATOR
                                                                                                                                                                                                                                                                                                                                                                RELATED
                                                                                                                                                                                                                                                                                                                                                                                            R.L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RELATED
                                                                                                                                                                                                                                                                                                                                                                                    medicinal leech.";
                                                                                                       Brachyura;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                           Indels
                                               Jaros
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4
                                                                                                                                                                                                                                                                                             4.
                                                                                                                                                                                                                                                                                                                                                                                                                                             Hirudinea;
                                                                                                                                                                                                                                                                                                                                                                PEPTIDE)
                                              P.P.,
                the
s.";
                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ?
                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                          0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
```

밁

U

Search

completed:

March

2001,

09:48:22

```
RESULT 15
BIOA_CITER
δÃ
                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SERCO
                       Query Match
Best Local S
Matches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Matc
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BIOA_CITFR
P13071;
01-JAN-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Neuropeptide;
MOD_RES
SEQUENCE 5 A
                                                                                                                                                                                                                  This SWI
between
                                                                                                                                                            use by non-profit institutions as lo
modified and this statement is not reme
entitles requires a license agreement (
or send an email to license@isb-sib.ch)
                                                                                                         Biotin biosynthesis;
                                                                                                                                         EMBL; M21922; CAB25179.1;
                                                                                                                                                                                            the European Bioinformatics Institute. There use by non-profit institutions as long as
                                                                                                                                                                                                                                                                     +++
                                                                                                                                                                                                                                                                                                             "Transcriptional regulation and gene arrangement of Escher Citrobacter freundli and Salmonella typhimurium biotin ope Gene 67:203-211(1988).

-I- CATALYTIC ACTIVITY: S-ADENOSYL-L-METHIONINE + 8-AMINO-OXONONANOATE. S-ADENOSYL-4-METHYLTHIO-2-OXOBUTANOATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-JAN-1990 (Rel. 13, Last sequence update)
01-DEC-1992 (Rel. 24, Last annotation update)
ADENOSYLMETHIONINE-8-AMINO-7-OXONONANOATE AMI
                                                                           SEQUENCE
                                                                                                 Pyridoxal
                                                                                                                                                                                                                                                                                                                                                                      Shiuan
                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-89006280;
                                                                                                                                                                                                                                                                                                                                                                                                               Citrobacter.
                                                                                                                                                                                                                                                                                                                                                                                                                          Bactería;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       AMINOTRANSFERASE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               !- SIMILARITY: BELONGS TO THE ALLATOSTATIN FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                  trobacter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4 F 4
                                                                                                                                                                                                                                                        7,8-DIAMINONONANOATE.
COFACTOR: PYRIDOXAL PHOSPHATE
COFACTOR: BYRIDOXAL PHOSPHATE
PATHWAY: BIOTIN BIOSYNTHESIS.
SUBUNIT: HOMODIMER.
SIMILARITY: BELONGS TO CLASS-
                                                                                                                                                                                                                                                SIMILARITY: BELONG AMINOTRANSFERASES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2.6.1.62)
   U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    H
                                                                                                                                                                                                                 SWISS-PROT entry is copyright. It is produced through sen the Swiss Institute of Bioinformatics and the EM
                                                                                                                                                                                                                                                                                                                                                                    D., Campbell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ω
                        Similarity 100
1; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                     PS00600;
                                                                                              phosphate.
                                                                                                                                                                                                                                                                                                                                                                                                                       Proteobacteria;
                                                                           ы
                                                                                                                                                                                                                                                                                                                                                                                                                                   freundii.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                           Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 £
                                                                                                                                                                                                                                                                                                                                                                                         N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (7,8-DIAMINO-PELARGONIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Amidation; 5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 586
                                                                           582
                                                                                                                     AA_TRANSFER_CLASS_3;
                                                                                                                                                                                                                                                                                                                                                                               PubMed=2971595;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       (FRAGMENT).
                                                                                       σı
                                                                                                          Transferase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22.2%;
                                 22.2%;
                                                                           MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Created)
                                                                                                                                                                                                                                                                                           PHOSPHATE
                                  .0%;
                                                                                                                                                                                                                                                                                                                                             ion and gene
Salmonella t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Multigene
                                                                                                                                                                                                                                                                                                                                                                                                                        gamma
                                                                                                                                                                                                                                                           CLASS-III
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AMIDATION (POTENTIAL) 672879D5AB300000 CRC64;
                                                                           6AAAB1B1A6F00000 CRC64,
                       Score 6; DB 1
Pred. No. 8.9
0; Mismatches
                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 6;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                        subdivision;
                                                                                                          Aminotransferase;
                                                                                                                                                                                   removed.
                                                                                                                                                                                                                                                            ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACID
                                                                                                                                                                        (See http://www.isb-sib
                                                                                                                     PARTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .
BB
                   8.9e+04;
0;
                                                                                                                                                                                                      There are no
                                                                                                                                                                                                                                                           PYRIDOXAL-PHOSPHATE-DEPENDENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1; Le .9e+04;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AMINOTRANSFERASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AMINOTRANSFERASE)
                                                                                                                                                                                   Usage
                                                                                                                                                                                                                                                                                                                                                                                                                        Enterobacter laceae
                                                                                                                                                                                             its content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                            Length
                                                                                                                                                                                                                                                                                                                            8-AMINO-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                        Indels
                                                                                                                                                                                  γď
                                                                                                                                                                                                                                                                                                                                                           Escherichia coli,
                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                       restrictions
                                                                                                                                                                                                                                                                                                                                              operons
                                                                                                                                                                                                                            മ
                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                    for
                                                                                                                                                                                                                           collaboration
                                                                                                                                                                                                                   outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                              ö
                                                                                                                                                                                                       9
                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

Job time: 180 sec

. 5

ij

```
Minimum
Maximum
RESULT
P82070
ID P8
AC P8
DT 01
DT 01
                                                                                                                                                                                                                        Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OM protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Post-processing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Total number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
P82070;
P82070;
01-MAY-2000
01-MAY-2000
                                                                                                                                                                                                                                                                                       Pred. No. 1s t
score greater
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    88
                                                                                                                                                                                                                           Score
                                                                                                                                                                                                                                                                                is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .
                                                                                                                                                                                                                                                                             No. is the number of results predicted by chance to have a greater than or equal to the score of the result being printed, derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein search, using sw
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | length:
| length:
                                                                                                                                                                                                                        Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  hits satisfying chosen parameters:
                                                                                                                                                                                                                                    Query
                                                                                                                         37.0
33.3
33.3
29.6
14.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Minimum Match 08
Maximum Match 1008
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SPTREMBL_15:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BLOSUM62
Gapop 10.0 ,
 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         374700 seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-081-522-7
27
1 RGDFV 5
                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                March
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Copyright
                                                                                                                                                                                                                                                                                                                                                                                 sp_phage:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                             sp_bacteria:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sp_archea: *
                                                                                                                                                                                                                                                                                                                                                                                            sp_organelle:*
                                                                                                                                                                                                                                                                                                                                             sp_rodent:*
sp_virus:*
                                                                                                                                                                                                                                                                                                                                                                                                      sp_mhc:*
                                                                                                                                                                                                                                                                                                                                                                                                                           sp_invertebrate:*
                                                                                                                                                                                                                                                                                                                           sp_unclassified:*
                                                                                                                                                                                                                                                                                                                                     sp_vertebrate:*
                                                                                                                                                                                                                                                                                                                                                                   sp_plant:*
                                                                                                                                                                                                                                                                                                                                                                                                                  sp_mammal:*
                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                  fungi:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2001, 09:48:05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (c) 1993
 13,
13,
                                                                                                                                                                                                                           띪
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         117207915 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gapext 0.5
Created)
Last sequence update)
                                                                                                                                                                                                                         Ħ
                                                                                                                                                                            P82070
P82099
P82073
                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      version - 2000
                                                                                        ALIGNMENTS
                                                                                                                                                                                                                                                          SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Search time 32.72 Seconds
                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Compugen
                                 ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (without alignments)
17.911 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    œ
                                                                                                                      P82070 litoria rub
P82079 litoria rub
P82073 litoria rub
P82100 litoria rub
P82071 litoria rub
P82072 litoria rub
O08433 rattus norv
Q99007 hordeum vui
                                                                                                                                                                                                                        Description
```

```
P82073
ID P8
AC P8
DT 01
                                                                                                                                                                                                                                                                                                                                        PRESSULA
PRE
                                                                                                                                                 밁
                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local &
Matches 2
                                                                                                                                                                                                                                  Query Match
Best Local S
Matches
P82073
P82073;
01-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P82099;
01-MAY-2000
01-MAY-2000
01-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Litoria rubella (Desert tree frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Neobatrachia; Bufonoidea; Hylidae;
Litoria.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "The structure of new peptides from the Australin red tree frog 'Litoria rubella'. the skin peptide profile as a probe for the study of evolutionary trends of amphibians.";
Aust. J. Chem. 49:955-963(1996).
-I- FUNCTION: CAERIDINS SHOW NEITHER NEUROPEPTIDE ACTIVITY NOR
                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                      rubella.";
Aust. J. Chem. 52:0-0(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Litoria rubella (Desert tree frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Neobatrachia; Bufonoidea; Hylidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            P82099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Amphibian skin.
SEQUENCE 5 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE-SKIN SECRETION;
Steinborner S.T., Wabn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=104895;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-MAY-2000 (TrEMBLrel. 13, RUBELLIDIN 1.1.
                                                                                                                                                                                                                                                                                                                                                           Amphibian skin;
                                                                                                                                                                                                                                                                                                                                                                                                                                               Litori electrica. Comparison
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Wabnitz P.A., Bowie J.H
"Peptides from the skin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=104895;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Litoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ELECTRIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ANTIBIOTIC ACTIVITY.
-!- TISSUE SPECIFICITY: SECRETED BY THE SKIN DORSAL
-!- MASS SPECTROMETRY: MW-598; METHOD-FAB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tyler M.J., Wallace J.C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE, AND MASS SPECTROMETRY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ISSUE-SKIN SECRETION;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (,)
                                                                                 w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N
                                                                                                                                                 T=T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 멀그림
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity 2; Conserv
                                                                                                                                                                                        տ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ω
                                                                                                                                                                                                                                2
                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                            U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (Trembirel. 13, Created)
(Trembirel. 13, Last seq
(Trembirel. 13, Last ann
(TrEMBLrel. 13,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                          A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                              Amidation.
                                                                                                                                                                                                                                                                                                                                     630 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Wabnitz P.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            598
                                                                                                                                                                                                                          37.0%; 50
100.0%; Pr
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         J.H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      44.4%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WW.
                                                                                                                                                                                                                                                                                                                                                                                                                                               , Tyler M.J., Wallace J.C. glands of the Australian brison with the skin peptide
                                                                                                                                                                                                                                                                                                                                        AMIDATION.
558761F2C9A00000 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6DD9C9CAB2A00000 CRC64,
  Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 12;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Last annotation update)
                                                                                                                                                                                                                                                      Score 10;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Waugh R.J.,
                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 13,
3.7e+05;
0;
                                         ഗ
                                                                                                                                                                                                                                                      DB 13;
3.7e+05;
                                         ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                             ralian buzzing
peptides from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bowie J.H.,
                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                          Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GLANDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gao
                                                                                                                                                                                                                                                                                                                                                                                                                                               tree fro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>.</u>
                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
```

0

```
RESULT
P82071
ID PE
AC PE
DT 01
DT 01
                                                                                                                                                                                                                                                                                                                                               RESULT
P82100
                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                     δÃ
                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                        Query Match
Best Local S
Matches 1
                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 2
                                                                                                                                                                                                                                                                                                P82100
P82100;
01-WAY-2000 (TrEMBLrel. 1:
01-WAY-2000 (TrEMBLrel. 1:
01-WAY-2000 (TrEMBLrel. 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                              P82071;
P82071;
01-MAY-2000
01-MAY-2000
                                                                                                                                                                                         TISSUE-SKIN SECRETION;
TISSUE-SKIN SECRETION;
Wabnitz P.A., Bowie J.H., Tyler M.J.,
"Peptides from the skin glands of the
"fetori electrica. Comparison with the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE.
SEQUENCE.
TISSUE-SKIN SECRETION;
Wabnitz P.A., Bowie J.H., Tyler M.J.,
"Peptides from the skin glands of the
"Peptides from the skin glands of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Litoria rubella (Desert tree
Eukaryota; Metazoa; Chordata;
Amphibia; Batrachia; Anura; N
                                                                                                                                                                                    Litori electrica.
rubella.";
                                                                                                                                                                                                                                                               Litoria rubella (Desert tree frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Neobatrachia; Bufonoidea; Hylidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Litori electrica. Comparison rubella.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RUBELLIDIN 3.2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-MAY-2000 (TrEMBLrel. 01-MAY-2000 (TrEMBLrel.
                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                             ELECTRIN 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Litoria.
                                                                                                                                                           Amphibian skin;
MOD_RES 5
                                                                                                                                                                                                                                                NCBI_TaxID=104895;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID-104895;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EQUENCE
                                                                      \vdash
                                                                                       4
                                                                                                                                                                                                                                                                                                                                                                                   N
                                                                                                                                                                                                                                                                                                                                                                                                   N
                                                                                                                                                                                                                                                                                                                                                        4
                                            ű
                                                                                                                                                                                                                                                                                                                                                                                  GFF
                                                                                                                                                                                                                                                                                                                                                                                             - GDF
                                                                      펌..
                                                                                       7
                                                                                                                                                                             J. Chem. 52:0-0(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity 2; Conserv
                                                                                       σ
                                                                                                       Similarity
1; Conserv
                                                                      N
                                                                                                                                                                                                                                                                                                                                                                                   4
                                                                                                                                                    u
(TrEMBLrel.
                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                          PRELIMINARY;
                                                                                                                                                    ξ
                                                                                                                                                           Amidation.
                                                                                                                                                   616
                                                                                                                33.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                             66
33
                                                                                                                                                    ¥.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13,
13,
                                                                                                                                                                                                                                                                                                     13,
13,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SHOW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SECRETED
                                                                                                                                                   AMIDATION.
61F2D1A059A00000
                                                                                                                                                                                                                                                                                                                                                                                                                                                               71A9C9C862A00000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               e frog).
a; Craniata; Vertebrata; E
Neobatrachia; Bufonoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Last
Last
                                                                                                        Score 9; DB 1
Pred. No. 3.7e
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                   Score 9; DB 1
Pred. No. 3.7e
0; Mismatches
          Created)
                                                                                                         1;
                                                                                                                                                                                                                                                                                                    Last sequence up
                                                                                                                                                                                                                                                                                                                      Created)
                                                                                                                                                                                                                                                                                                                                                                                                                    0;
Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NEITHER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ВУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sequence update) annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NEUROPEPTIDE ACTIVITY
                                                                                                                                                                                            Wallace J.C.;
Australian buzzing
skin peptides from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Wallace J.C.;
Australian buzzing skin peptides from
                                                                                                                  DB 13;
3.7e+0
                                                                                                                                                                                                                                                                                                                                                                                                                             DB 13;
3.7e+0
                          ഗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SKIN DORSAL GLANDS
                                                                                                         .7e+05;
les 0;
                                                                                                                                                                                                                                                                                                                                                                                                                             .7e+05;
                                                                                                                                                                                                                                                                                                                                        B
                          A
                                                                                                                                                                                                                                                                                                            update)
                                                                                                                                                    CRC64;
                                                                                                                                                                                                                                                                                                     update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                               CRC64
                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Euteleostomi;
a; Hylidae;
                                                                                                                        ភ
                                                                                                                                                                                                                                                                                                                                                                                                                                     Ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          n Litoria
                                                                                                                                                                                            tree frog
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NOR
                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                         0
                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                    0;
```

```
PRESULTATION OF THE STATE OF TH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                               δÃ
                                                                           Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query
Best I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The structure of new peptides from the Australin revisions in the structure of new peptides from the Australin revisions in the structure of each peptide profile as a prolon of evolutionary trends of amphibians.";

Aust. J. Chem. 49:955-963(1996).

-I. FUNCTION: CAERIDINS SHOW NEITHER NEUROPEPTIDE ACTIVITY.

-I. TISSUE SPECIFICITY: SECRETED BY THE SKIN DORSAL (
-I. MASS SPECIFICITY: WM-626; METHOD-FAB.

Amphibian skin.

Amphibian skin.

SEQUENCE 5 AA; 625 MW; 6DD9C9CB10300000 CRC64;
                                                                                                                                                                       Amphibian
MOD_RES
SEQUENCE
                                                                                                                                                                                                                           "The structure of new peptides from the Aust Littoria rubells'. the skin peptide profile of evolutionary trends of amphibians."; Aust. J. Chem. 49:955-963(1996).

-I- FUNCTION: CAERIDINS SHOW NEITHER NEUROPE ANIIBIOTIC ACTIVITY: SECRETED BY THE SKIN-1- MISSUB SPECIFICITY: SECRETED BY THE SKIN-1- MASS SPECIFORMETRY: MW-655; METHOD-FAB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RUBELLIDIN 3.1.
Litoria - ubella (Desert tree frog).
Eukaryota, Metazoa, Chordata, Craniata,
Amphibia, Batrachia, Anura, Neobatrachia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P82072
P82072;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Steinborner S.I., Wahr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Litoria rubella (Desert tree frog).
Eukaryota; Metazoa; Chordata; Craniata; V
Amphibia; Batrachia; Anura; Neobatrachia;
Litoria.
                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE-SKIN SECRETION;
Steinborner S.T., Wabnitz P.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-MAY-2000
01-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=104895;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-MAY-2000 (TrEMBLrel. RUBELLIDIN 2.1.
                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=104895;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tyler M.J., Wallace J.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Litoria
                                                                                                                                                                                                                                                                                                                                                                                      yler M.J., Wallace J.C.;
                                                                                           Y Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
 N
                                     ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 σ
표 :- DF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       된 ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4
                                                                           Similarity
1; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                             skin;
                                                                                                                                                                                                                                                                                                                                                                                                                                            AND MASS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AND
                                                                                                                                                                           u
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              O (TrEMBLrel.
O (TrEMBLrel.
O (TrEMBLrel.
                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                         AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MASS
                                                                                                                                                                                         ; Amidation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              , Wabnitz
                                                                                                                                                                           656
                                                                                                                                                                                                                                                                                                                                                                                                                                            SPECTROMETRY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SPECTROMETRY
                                                                                             29.6%;
50.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Anura; Neobatrachia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29.6%;
                                                                                                                                                                           MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P.A.,
                                                                                                                                                                         AMIDATION.
71A9C9CB10300000
                                                                           Score 8; DB 1
Pred. No. 3.7e
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Last annotation
                                                                                                                                                                                                                                                                                         NEITHER NEUROPEPTIDE ACTIVITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                 ED BY THE SKIN METHOD=FAB.
                                                                                                                                                                                                                                                                                                                                                                                                      Waugh R.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Waugh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NO ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R.J.,
                                                                                         DB 13;
3.7e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 13;
3.7e+05;
                                                                                                                                                                                                                                                                                                                                                 Australin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Vertebrata; Euteleostomi; a; Bufonoidea; Hylidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Vertebrata; Euteleostomi;
a; Bufonoidea; Hylidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bowie J.H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        update)
                                                                                                                                                                                                                                                                                                                                                                                                        Bowie J.H.,
                                                                                                                                                                                                                                                   DORSAL GLANDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DORSAL GLANDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                             0
                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      probe for
                                                                                                                                                                                                                                                                                                                                                 probe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      probe
                                                                                                                                                                                                                                                                                                                                                                    red
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACTIVITY
                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                 tree
e for
                                                                                                                   çι
                                                                                                                                                                                                                                                                                                                                                                                                        Gao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gao
                                                                                                                                                                                                                                                                                                                                                 frog
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      frog
                                                                                                                                                                                                                                                                                           NOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NOR
                                                                                                                                                                                                                                                                                                                                                                                                        c.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              c.,
                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                 study
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      study
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                             Gaps
                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

```
RESULT OF STATE OF ST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 14.8%;
Best: Local Similarity 100.0%;
Matches 1; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NON_TER
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     799007 PRELIMINARY; PRT; 5 AA.
799007;
701-NOV-1996 (TIEMBLIEL. 01, Created)
701-NOV-1996 (TIEMBLIEL. 01, Last sequence update)
701-NOV-1998 (TIEMBLIEL. 08, Last annotation update)
71-NOV-1998 (EC 3.2.1.1) (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sato H., Aono S., Kashiwamata S., Koiwai O.;
"Genetic defect of bilirubin UDP-glucuronosyltransferase in the hyperbilirubinemts Gunn rat.";
Biochem. Biophys. Res. Commun. 177:1161-1164(1991).

-i- FUNCTION: UDPGT IS OF MAJOR IMPORTANCE IN THE CONJUGATION AND SUBSEQUENT ELIMINATION OF PCTENTIALLY TOXIC XENOBIOTICS AND ENDOGENOUS COMPOUNDS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q08433
Q08433;
                                                                                                                                                                                                                    SEQUENCE FROM N.A.

STRAIN+HIMALAYA; TISSUE-ALEURONE LAYER;

STRAIN-1329704; PubMed-1831055;

MEDLINE-913129704; PubMed-1831055;

Jacobsen J.V., Close T.J.;

"Control of transient expression of chimaeric genes by gibberellic "Control of transient expression of chimaeric genes by gibberellic "Control of transient expression of chimaeric genes by gibberellic acid and abscisic acid in protoplasts prepared from mature barley aleurone layers.";

Plant Mol. Biol. 16:713-721(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hordeum vulgare (Barley).
Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta;
Magnoliophyta; Liliopsida; Poales; Poaceae; Hordeum.
NCBI_TaxID=4513;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -!- SUBCELLULAR LOCATION: MICROSOME EMBL; S38636; AAB19259.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rat
NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-NOV-1996 (TrEMBLrel. 01, 01-NOV-1996 (TrEMBLrel. 01, 01-JAN-1999 (TrEMBLrel. 09,
  Hydrolase;
Calcium; M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Transferase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                          -i- CATALYTIC ACTIVITY: ENDOHYDROLYSIS OF 1.4 -ALPHA-GLUCOSIDIC LINKAGES IN OLIGOSACCHARIDES AND POLYASACCHARIDES.
-i- COFACTOR: BINDS A CALCIUM ION REQUIRED FOR ITS ACTIVITY.
-i- MISCELLANEOUS: THERE ARE AT LEAST 4 TYPES OF ALPHA-AMYLASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=91282758;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JDP-GLUCURONOSYLTRANSFERASE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 V 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5 V 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CATALYTIC ACTIVITY:
BETA-D-GLUCORONOSIDE
                                                     X54643; CAA38455.1;
e; Glycosidase; Ca
Multigene family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Glycosyltransferase; Microsome; Multigene family
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PubMed-1840486;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MW;
                          Carbohydrate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            UDP-GLUCURONATE + ACCEPTOR -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            633732C420000000 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 4; DB 1
s; Pred. No. 3.7
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Last sequence update)
Last annotation update)
, MICROSOMAL (EC 2.4.1.17) (UDPGT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Created)
                             metabolism;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 11; L
o. 3.7e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 4;
                             Seed;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               UDP + ACCEPTOR
                             Germination;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rattus
                                                                                                                H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
```

```
Ş
                                                                  SQ
밁
                            Query Match
Best Local Similarity
Matches '0; Conserv
                                                                  NON_TER
SEQUENCE
1 R 1
                                                                  ហ
                              Conservative
                                                                  Å,
                                                                  600 MW;
                                     0.0%;
                                                                  61E3344DD6F00000 CRC64;
                            Score 2; DB 10;
Pred. No. 3.7e+05;
1; Mismatches
                               0;
                                            Length
                               Indels
                              0
                              Gaps
```

0

Search completed: March Job time: 191 sec

ó

2001, 09:48:05

THIS PAGE BLANK (USPTO)

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Title:
Perfect score:
                                                                                                                                                                                                                                                                   Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Run on:
                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                             Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    seq length:
seq length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-081-522-8
83
1 YTAECKPOVTBERN
                                                                                                                                                                                                                                              Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                              10:
11:
12:
13:
13:
14:
15:
16:
16:
18:
19:
20:
                                                                                                                            100.0
100.0
100.0
57.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A_Geneseq_36:*
1: /SIDS1/acada
                        43.4
43.4
36.1
36.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    March 6, 2001, 09:45:58; Search time 14.72 Seconds (without alignments) 34.844 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      268485 seqs, 34193795 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                          /SIDS1/gcgdata/geneseq/geneseqp/AA1991.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1992.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1992.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1994.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1995.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1995.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1996.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1998.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1999.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1999.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           YTAECKPQVTRGDVF 15
                                                                                                                          .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /SIDS1/gogdata/geneseq/geneseqp/AA1980.DAT:*
/SIDS1/gogdata/geneseq/geneseqp/AA1981.DAT:*
/SIDS1/gogdata/geneseq/geneseqp/AA1982.DAT:*
/SIDS1/gogdata/geneseq/geneseqp/AA1983.DAT:*
/SIDS1/gogdata/geneseq/geneseqp/AA1984.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /SIDS1/gcgdata/geneseg/genesegp/AA1985.DAT:*
/SIDS1/gcgdata/geneseg/genesegp/AA1986.DAT:*
/SIDS1/gcgdata/genesegy/genesegp/AA1987.DAT:*
/SIDS1/gcgdata/geneseg/genesegp/AA1988.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                          /SIDS1/gcgdata/geneseq/geneseqp/AA2000.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /SIDS1/gcgdata/geneseq/geneseqp/AA1989.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1990.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15
                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                占
                                                                                                                                                               R82390
W33058
W41102
                                                                                                       R67663
W66820
                                                                                                                                                                                                                                                                                                          SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  107883
                                                                                                                      Alpha-v, beta-5 vi
Alpha-v beta-3 ant
Alpha-v-beta-5 ant
Synthetic peptide
Peptide used in pu
peptide used to in
Human bone apposit
Human bone apposit
Human bone apposit
Cell-to-cell bindi
                                                                                                                                                                                                                                            Description
                                                                                                                                                                                                      Integrin alpha-v-b
```

				•																													
6 31.	6 31.	6 31.	6 31.	6 31.	6 31.	6 31.	6 31.	6 31.	6 31.	6 31.	6 31.	7 32.	7 32.	7 32.	7 32.	7 32.	7 32.	7 32.	7 32.	7 32.	7 32.	7 32.	7 32.	7 32.	7 32.	7 32.	7 32.	7 32.	5 33.	8 33.	28 33.7	8 33.	
_	ш	L	ju.a	-	-	-	N	Ľ	N	N	ᆫ	ш		μ	,	 _	ப	<u>,_</u>	<u></u>	_	_			_	ᆫ	ᆸ	ᆫ	ᆫ	N	⊢	12 21		
95	W55953	95	469	468	462	380	26	5	86	W97047	R21425	W58107	W22347	W58108	W22348	W58116	W22356	W68128	W58125	W58124	W68117	W58109	813	2	W68123	812	23	5046	8188	9595	Y84806	7624	
Human vas	Human vas	Human vas	Amino ac:	Amino acid	O		Peptide (Peptide u	×	Human bone	Human bone	3	_	_	_	_	_	_	Human bone	_	_	Human bone	_	Human bone	Human bone	н	Yeast SAH1	rol	řn	Human Fas	
vascular per		vascular per			id sequenc	3		ang		used to in	tide fr	appo		apposi	apposi	apposi	apposi	apposi	apposi	apposi	ne apposit			apposi	apposi		appos		Б П	Suo	ide	s peptide	

ALIGNMENTS

```
RESULT
R82390
                                                                                               30-DEC-1994;
18-MAR-1994;
                                                                                                                       09-MAR-1995;
                                                                                                                                      28-SEP-1995.
                                                                                                                                                                       Synthetic
                                                                                                                                                                                      Integrin; alpha-v-beta-3; inhibitor; angiogenesis; antagonist;
fibrinogen; inflammation; apoptosis; restenosis.
                                                                                                                                                                                                              Integrin alpha-v-beta-3 inhibitor peptide no.
                                                                                                                                                                                                                               03-MAY-1996 (first entry)
                                                                                                                                                                                                                                                               R82390 standard: peptide; 15
                                                               Brooks F, Cheresh DA;
                                                                               (SCRI ) SCRIPPS RES INST
                                                                                                                                                       WO9525543-A1.
                                                                                                                                                                                                                                                R82390;
                                                                                               94US-0366665.
94US-0210715.
                                                                                                                       95WO-US03035
                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                62880
```

Oligopeptide, anti

Inhibition of angiogenesis in a tissue, e.g. following angioplasty - by admin. of a compsn. comprising an alpha-v-beta3 antagonist, useful for regression of established tumours, treating inflamed

tissue, etc.

WPI; 1995-344463/44.

o,

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R82386-96 are a group of inhibitor peptides of integrin alpha-v-beta-3. The inhibitor peptides may be administered in a compan, and are useful for inhibition of inflamed tissue angiogenesis, e.g. that associated with rheumatoid arthritis, retinal angiogenesis associated with diabetic retinopathy, that associated with hammangioma, solid tumours, or solid tumour metastases. The alpha-v-beta-3 atagonists are also useful to induce apoptosis in neovasculature in a tissue. The inhibitor peptides are pref. cyclic and contain an RGD sequence.
                                                                                                                            Inhibiting angiogenesis with an antagonist selective for the alpha-v,beta-5 integrin receptor - e.g. antibody, RGD peptide or organic mimetic, for treatment of inflammation, eye disease, tum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rheumatoid arthritis; eye disease; diabetic retinopathy; age related macular degeneration; ocular histoplasmosis; retinopathy; prematurity; neovascular glaucoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                W33058
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           W33058 standard;
         The present RGD containing peptide is an antagonist of the alpha-v beta-5 vitronectin receptor, which can be used to inhibit angiogenesis in alpha-v beta-5 containing tissue, specifically angiogenesis as a result of inflammation (especially rheumatoid
                                                                                                                                                                                                                                                                             14-AUG-1995;
14-AUG-1996;
                                                                                                                                                                                                                                                                                                                                                     27-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  corneal neovascular disorder; transplantation; herpetic; luetic; keratitis; pterygium; neovascular pannus; haemangioma; solid tumour; metastasis; cytokine; low toxicity;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 4; Page 47; 135pp; English
                                                                                  Claim
                                                                                                                                                                                                                    Brooks P,
                                                                                                                                                                                                                                                                                                                        13-AUG-1996;
                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                         transforming
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         vitronectin receptor; inhibition; angiogenesis; inflammation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RGD containing peptide; antagonist; alpha-v, beta-5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26-JAN-1998
                                                                                                                                                                                                                                                 (SCRI ) SCRIPPS RES INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 YTAECKPQVTRGDVF 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ytaeckpqvtrgdvf 15
                                                                                  <u>ن</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          l Similarity
15; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       beta-5 vitronectin receptor antagonist.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       endothelial growth
                                                                                  Page 105;
                                                                                                                                                                                                                    Cheresh DA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                        growth factor alpha;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                             95US-0514799
96ZA-0006886
                                                                                                                                                                                                                                                                                                                        96WO-US13194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          peptide;
                                                                                 126pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100
                                                                                                                                                                                                                      Friedlander
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15
                                                                                  English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 83; DB 16;
Pred. No. 5.5e-08;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                        epidermal growth factor
                                                                                                                             eye disease, tumours
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

```
8888888888888888
   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  prematurity or neovascular glaucoma), corneal neovascular disorder (especially transplantation, herpetic or luetic keratitis, pterygium and neovascular panus associated with wearing contact lenses), haemangioma, solid tumours and their metastases or cytokines (especially vascular endothelial growth factor, transforming growth factor alipha or epidermal growth factor). The antagonist has the advantage of being very specific, affecting no processes other than angiogenesis and therefore of relatively low
              anglogenesis is mediated by the specific vitronectin receptor alpha-v beta-3, and that inhibition of alpha-v beta-3 function inhibits anglogenesis. Claimed antagonists of alpha-v beta-3 comprise C-terminal fragments (see W41083-94) of human or chicken matrix metallogroteinase-2, fusion polypeptides, cyclic or linear
                                                                                                                   This RGD-containing linear peptide, designated 62880, corresponds to amino acid residues of 35-49 of vitronectin. It is a particularly preferred peptide that has integrin alpha-v beta-3 antagonist activity. It exhibits preferential inhibition of fibrinogen or vitronectin binding to the alpha-v beta-3 receptor.
                                                                                                                                                                                                                                           treating tumours, inflammation,
                                                                                                                                                                                                                                                          Packaging material containing polypeptide antagonist of alphav,
beta3 integrin - used for inhibition of anglogenesis, and for
                                                                                                                                                                                                                                                                                                        WPI;
                                                                                                                                                                                                                                                                                                                                                                                             31-MAY-1996;
31-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                       30-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            vitronectin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     08-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 W41102;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             W41102 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      toxicity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         related macular degeneration, ocular histoplasmosis, retinopathy
polypeptides,
                                                                                          Peptide 62880 can be prepared using standard solid-phase synthesis techniques. The invention relates to the discovery that
                                                                                                                                                                                                                                                                                                                                    Brooks P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     04-DEC-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO9745137-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Angiogenesis;
                                                                                                                                                                                                                                                                                                                                                              (SCRI ) SCRIPPS RES INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 YTAECKPQVT#GDVF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ω
                                                                                                                                                                                                                                                                                                        1998-032334/03.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ytaeckpgvtrgdvf
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                  Cheresh DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
   derivatised
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            inhibitor; antagonist; integrin alpha-v beta-3;
eceptor; rheumatoid arthritis; tumour; metastasis;
                                                                                                                                                                                                                                                                                                                                                                                             96US-0018733.
96US-0015869.
                                                                                                                                                                                                                                                                                                                                                                                                                                         97WO-US09158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        antagonist linear peptide
                                                                                                                                                                                                                51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Peptide;
                                                                                                                                                                                                               234pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15
 2, fusion polypeptides, cyclic or linear polypeptides, a monoclonal antibody or
                                                                                                                                                                                                                English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score
Pred.
                                                                                                                                                                                                                                            eye diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            corneal neovascular disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 18;
5.5e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of.
```

¢

organic

mimetic compound.

They can be used to inhibit angiogenesis

```
RESULT
W41244
ID W4
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  និនិនិនិន្និន្ន
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
    The present peptide represents an alpha-v-beta-5 integrin antagonists. Alpha-v-beta-5 is a vitronectin receptor. Inhibitors of alpha-v-beta-5 can inhibit angiogenesis. The specification describes a novel labelled package that contains an inhibitor of angiogenesis i.e. an alpha-v-beta-5 antagonising polypeptide that binds to integrin alpha-v-beta-5 and includes a part of the C-terminal domain of MMP-2. The antagonists are used to inhibit angiogenesis in inflamed tissue, in solid tumours or metastases, and in a wide range of ocular disorders (e.g. diabetic or other forms of retinopathy, neovascular glaucoma, or corneal transplants). They are particularly used to induce regression to inhibit growth of tumours. The alpha-v-beta-5 antagonists can also be used to treat restenosis caused by migration of smooth muscle cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      arthritis), in solid tumours or metastases (particularly to induce regression or inhibit tumour growth), and in ocular disorders such as diabetic retinopathy and macular degeneration, as well as to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     W41244;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              W41244 standard;
                                                                                                                                                                                   Disclosure;
                                                                                                                                                                                                                      Packaging material containing polypeptide antagonist of alphave betas integrin - used for inhibition of angiogenesis, and for
                                                                                                                                                                                                                                                              WPI; 1998-041758/04.
                                                                                                                                                                                                                                                                                                                                             31-MAY-1996;
31-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                                                   30-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                            04-DEC-1997.
                                                                                                                                                                                                                                                                                                                                                                                                                                      WO9745447-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          angiogenesis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alpha-v-beta-5 antagonist;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alpha-v-beta-5 antagonistic peptide 62880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           09-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           treat restenosis (all claimed).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ä
                                                                                                                                                                                                                                                                                                                 (SCRI ) SCRIPPS RES INST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 YTAECKPQVTRGDVF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               inflammed tissue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 Similarity
                                                                                                                                                                                                                                                                                         ָּט
                                                                                                                                                                                                          tumours, inflammation,
                                                                                                                                                                                                                                                                                         Cheresh DA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15
                                                                                                                                                                                Page 41; 117pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ξ,
                                                                                                                                                                                                                                                                                                                                           96US-0018733
96US-0015869
                                                                                                                                                                                                                                                                                                                                                                                   97WO-US09099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note= "peptide is made cyclic via
last residues"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (for treatment of arthritis or rheumato)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          onist; treatment; vitronectin receptor; inhibition;
growth; restenosis; neovascularisation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15
                                                                                                                                                                                                                                                                                         Friedlander
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . 08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ⊢
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score
Pred.
                                                                                                                                                                                                         eye diseases etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 83;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .5e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                          in
                       be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

```
RESULT REPORT RE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SSSSSXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                               Influenza virus nucleoprotein (NP) epitopes may be inserted into immunoglobulin complementarity determining regions to render the immunoglobulin molecule antigenic, making it useful as a vaccine. Such antigenised antibodies can be used can be used to induce tolerance to particular antigens (including those associated with autoimmune diseases); to down-regulate hypersensitivity to allergens, or to provide active or passive immunity against pathogenic antigens. The antigenic immunoglobulins are fully functional as regards.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New immunoglobulin contg. influenza virus nucleoprotein - useful in vaccines to induce specific anti-viral immur related DNA, vectors and transfected host cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The antagonists particularly inhibit neovascularisation where this is induced by cytokines, e.g. transforming growth factor alpha, epidermal growth factor or especially vascular endothelial growth factor. note: this sequence does not appear in the specification; it was created in the specification; it was created the sequence of the
                                                                                                               localisation on cell or receptor sites and elicit cytotoxic T lymphocytes specific for the incorporated epitope. This synthetic peptide corresponds to a region of the cell-adhesive molecule
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       08-DEC-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic peptide of cell-adhesive molecule vitronectin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          07-AUG-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R67653;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R67653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      using information
    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Example 1B; Page 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1995-022720/03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         28-MAY-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 W09428026-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          hypersensitivity;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Influenza; nucleoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (REGC ) UNIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       complementarity determining
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 YTAECKPOVTRGDVF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ഗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ᄓ
        15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CALIFORNIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first
    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9305-0068895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        94WO-US06090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              immunity;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  provided.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      62pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             immunoglobulin; NP; CDR:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          region; epitope; antigen; pathogen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 19;
5.5e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              immunity,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tolerance;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              epitope
nity, also
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

Query Match Best Local S Matches 9

Similarity 9; Conser

llarity 100.0%; I Conservative 0;

57.8%;

Score 48; Pred. No.

DB 16; 0.053;

Length 15

Mismatches

0

Indels

0

Gaps

```
RESULT
W66820
                                                                                                                                                                                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                         RESULT
W97014
SAXAXB
                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12-APR-1995;
15-APR-1994;
08-SEP-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             receptor-mediated binding of cells to a matrix. They may be used for reducing or inhibiting osteoclast binding to a matrix. Administration is oral, parenteral, topical, transdermal or by inhalation. The present sequence represents a peptide used in an affinity chromagraphy column for purification of the human alpha v beta 3 vitronectin receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Use of peptide derivatives which can alter integrin receptor binding - for altering bone resorption, treating angiogenesis or restenosis and altering integrin receptor mediated interactions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                bone resorption; pharmacore; angio alpha v beta 3 integrin receptor; affinity chromatography.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        W66820 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1998-555601/47.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (LJOL-) LA JOLLA CANCER RES CENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12-APR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15-SEP-1998.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US5807819-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Peptide used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to peptides that are useful for inhibiting be resorption, angiogenesis or restenosis, and for altering integrin receptor-mediated interactions, especially alpha v beta 3 integrin receptor-mediated binding of cells to a matrix. They may be used for the property of the contract of 
                      26-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 2; Column 22;
                                                                    W97014;
                                                                                                                 W97014 standard;
                                                                                                                                                                                                                                         ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               POVTRGDVF
                                                                                                                                                                                                                                  ||||||||
| vtrgdvf 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         pqvtrgdvf 10
                                                                                                                                                                                                                                                                                      VTRGDVF 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ingram
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ø
                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ã,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  95US-0421698.
94US-0227316.
94US-0303052.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  94US-0421698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                purification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <del>بر</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  pharmacore; anglogenesis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        peptide;
                                                                                                                 peptide;
                                                                                                                                                                                                                                                                                                                                                        43.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mullen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              87pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
AA
                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                          Score 36; pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ď
                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                of vitronectin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tschopp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              osteoclast;
                                                                                                                                                                                                                                                                                                                                  DB 19; 1
. 2.1e+05;
ches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              restenosis; integrin receptor; st; vitronectin receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                receptor.
                                                                                                                                                                                                                                                                                                                                                                              Length 9;
                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    bone
                                                                                                                                                                                                                                                                                                                                    0
```

Marie alter trans

11-DEC-1997;

97WO-CA00967

```
RESULT
W68121
ID W6
                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                          Best
                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12-APR-1995;
13-APR-1994;
08-SEP-1994;
                                                                                                                                                                                                                                                                                                                                                                               The present peptide represents a non-naturally occurring Arg-Gly-Asp (RGD)-containing peptide. The peptide may be useful for reducing or inhibiting bone resorption, angiogenesis or restenosis, and for altering an integrin receptor mediated interaction. The peptide may also be used to inhibit the binding of an osteoclast to bone.
                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RGD-peptide; bone
integrin receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Peptide used
                                                                                                                                           osteoporosis;
                                                                                                                                                                                         30-SEP-1998
                                                                                                                                                                                                          W68121;
                                                                                                                                                                                                                             W68121 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Disclosure; Columns 35-36; 90pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RGD peptides -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1999-179486/15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cheng
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12-APR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US5849865-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic
                           18-JUN-1998.
                                             WO9826070-A1
                                                                                   Misc-difference
                                                                                             Key
                                                                                                               Homo
                                                                                                                         Synthetic.
                                                                                                                                                   Bone stimulatory activity; BSA; bone
                                                                                                                                                                     Human bone apposition peptide modified active fragment 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (LJOL-)
                                                                                                                                                                                                                                                                                                                Local Similarity
nes 7; Conserv
                                                                                                                                                                                                                                                                           1 vtrgdvf 7
                                                                                                                                                                                                                                                                                              9 VIRGDVF 15
                                                                                                                                                                                                                                                 ω
                                                                                                              sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LA JOLLA CANCER RES FOUND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ingram R,
                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       to inhibit bone resorption, angiogenesis and
                                                                                                                                                                                        (first entry)
                                                                                                                                          bone apposition
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             94US-0227316.
94US-0303052.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     that modulate integrin-mediated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9508-0421695
                                                                                    Location/Qualifiers
                                                                 /note=
                                                                                                                                                                                                                             peptide;
                                                                          'label=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            resorption;
mediated in
                                                                                                                                                                                                                                                                                                                          43.48;
100.08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mullen
                                                               "wild-type (W68109)
                                                                                                                                                                                                                              10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            on; angiogenesis; restenosis;
interaction; binding; osteoclast;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Á
                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                           Score 36;
Pred. No.
                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tschcpp
                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                    growth; bone reduction disease;
                                                                                                                                                                                                                                                                                                                        DB 20; I
2.1e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          H,
                                                                Asp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cell-matrix binding
                                                                 ĺS
                                                                                                                                                                                                                                                                                                                                   Length
                                                                replaced by
                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          restenosis.
                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              bone
                                                                 Glu"
                                                                                                                                                                                                                                                                                                                  Gaps
```

0;

F

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This is a modified active fregment of the human bone apposition peptide (W68101). Peptides derived from this sequence (W68101) can exhibit bone stimulatory activity (B3A). The specification provides active peptide sequences as shown in W68103 to W68109, W68117 to W68123 and W68129 to W68133 which promote bone growth in mammals. These peptides have in vivo BSA in mammals and increase the mineral content in bones. A vector comprising a DNA sequence encoding the BSA activity exhibiting peptides or their analogues can be used to recombinantly produce the polypeptides. The polypeptides can be used for the stimulation of bone growth. They can be used in the prevention and treatment of a bone reduction disease, particularly osteoporosis. The products can also be used for detection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New bone growth stimulating factors - us
the diagnosis, prevention and treatment
particularly osteoporosis
                                                                                                                                                Misc-difference
                                                                                                                                                                                                                                                            Bone stimulatory activity; BSA; bone growth; bone reduction osteoporosis; bone apposition.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 35; Page 56; 82pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1998-348527/30.
N-PSDB; V41207.
                        11-DEC-1996;
                                                                                                                                                                                                                                      Synthetic
                                                                                                                                                                                                                                                                                            Human bone apposition peptide modified active fragment 12.
                                                                                                                                                                                                                                                                                                                          30-SEP-1998
                                                                                                                                                                                                                                                                                                                                                  W68122;
                                                                                                                                                                                                                                                                                                                                                                          W68122 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11-DEC-1996;
(GENS-) GENSCI REGENERATION SCI INC.
                                                 11-DEC-1997;
                                                                                                W09826070-A1
                                                                                                                                                                                      Misc-difference
                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tam CS
                                                                                                                                                                                                                                                                                                                                                                                                                                      u
                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 YTAECK 6
                                                                                                                                                                                                                                                                                                                                                                                                  G
                                                                                                                                                                                                                                                                                                                                                                                                                                      htaeck
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENSCI REGENERATION SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10
                                                                                                                                                                                                                                                                                                                                                                                                                                      10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3
                        96US-0763458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      96US-0763458
                                               97WO-CA00967
                                                                                                                        /note=
                                                                                                                                     /label- D8E
                                                                                                                                                           /note= "wild-type (W68109) Asn
                                                                                                                                                                         /iabel- N3Q
                                                                                                                                                                                                 ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                          peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               36.1%;
                                                                                                                      "wild-type (W68109) Asp is replaced by Glu
                                                                                                                                                                                                                                                                                                                                                                          10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No. 41;
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          used
nt of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            to develop products for
bone reduction disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                           is replaced by Gln'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                         disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        h. They can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

```
WAS SALES OF THE S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sequences as shown in W68103 to W68104, wooll, to work was well as shown in W68103 to w68104, wooll, to wooll w68133 which promote bone growth in mammals. These peptides have in vivo BSA in mammals and increase the mineral content in bones. A vector comprising a DNA sequence encoding the BSA activity exhibiting peptides or their analogues can be used to recombinantly produce the polypeptides. The polypeptides can be used for the stimulation of bone growth. They can be used in the prevention and treatment of a bone reduction disease, particularly osteoporosis. The products can also be used for detection
                         11-DEC-1996;
                                                                    11-DEC-1997;
                                                                                                                       18-JUN-1998.
                                                                                                                                                                       WO9826070-A1
                                                                                                                                                                                                                                                                                                                   Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                            Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                        Key
Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bone stimulatory activity; BSA; bone growth; bone reduction osteoporosis; bone apposition.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human bone apposition peptide modified active fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-SEP-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              W58119 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This is a modified active fragment of the human bone apposition peptide (W68101). Peptides derived from this sequence (W68101) can exhibit bone stimulatory activity (3SA). The specification provides active peptide sequences as shown in W68103 to W68109, W68117 to W68123 and W68129 to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New bone growth stimulating factors - used the diagnosis, prevention and treatment of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tam
                                                                                                                                                                                                                                              Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                W68119;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              particularly osteoporosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5 htaeck
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 YTAECK 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cs;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1998-348527/30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Page 57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                 /note-
                         96US-0753458
                                                                       97WO-CA00967
                                                                                                                                                                                                                                         /label- D8E
/note- "wild-type (W68109)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                     /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           peptide;
                                                                                                                                                                                                                                                                                                                                          'note=
                                                                                                                                                                                                                                                                                                                                                                                                                   /note= "N-terminal acetylation"
                                                                                                                                                                                                                                                                                                                                                                   label= N3Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          35,18;
                                                                                                                                                                                                                     "C-terminal amide"
                                                                                                                                                                                                                                                                                                                                          "wild-type (W68109) Asn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 30; DB
Pred. No. 41;
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                   Asp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       to develop products for bone reduction disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
                                                                                                                                                                                                                                                                                                                                          żs
                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 10
                                                                                                                                                                                                                                                                   replaced by Glu"
                                                                                                                                                                                                                                                                                                                                          replaced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                          þу
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

```
RESULT 11
R24067
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This is a modified active fragment of the human bone apposition peptide (M68101). Peptides derived from this sequence (M68101) can exhibit bone stimulatory activity (BSA). The specification provides active peptide sequences as shown in W68103 to W68109, W68117 to W68123 and W68129 to W68113 which promote bone growth in mammals. These peptides have in vivo BSA in mammals and increase the mineral content in bones. A vector comprising a DNA sequence encoding the BSA activity exhibiting peptides or their analogues can be used to recombinantly produce the polypeptides. The polypeptides can be used for the stimulation of bone growth. They can be used in the prevention and treatment of a bone reduction disease, particularly osteoporosis. The products can also be used for detection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New bone growth stimulating factors - used the diagnosis, prevention and treatment of particularly osteoporosis
Peptides inhibiting binding of adhesion mols. to cells expressing integrins - for treating and preventing thrombus formation and diseases associated with platelet aggregation
                                                                                                                                                                                                                                                          Cross-links
                                                                                                                                                                                                                                                                                                                                                                                                                           R24067 standard; Protein; 11
                                                                                                                               07-NOV-1990;
                                                                                                                                                         07-NOV-1991;
                                                                                                                                                                                                         W09208476-A.
                                                                                                                                                                                                                                                                                                Synthetic
                                                                                                                                                                                                                                                                                                                        Adhesion; integrin; multimer
                                                                                                                                                                                                                                                                                                                                                   Cell-to-cell
                                                                                                                                                                                                                                                                                                                                                                           27-NOV-1992
                                                                                                                                                                                                                                                                                                                                                                                                    R24067
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1998-348527/30
                                                     WPI; 1992-199940/24.
                                                                                                      (SCRI ) SCRIPPS RES INST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (GENS-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
nes 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 YTAECK 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           htaeck 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14; Page 32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENSCI REGENERATION
                                                                              RA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                               · 900S-0610363
                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A,
                                                                             Ruggeri ZM;
                                                                                                                                                         91WO-US08328
                                                                                                                                                                                                                                                        Location/Qualifiers
2..>11
                                                                                                                                                                                                                                               /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    82pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        36.1%;
83.3%;
                                                                                                                                                                                                                                                                                                                                                inhibiting peptide subunit (6).
                                                                                                                                                                                                                                  "multimers of sequence linked by interchain disulfide bonds with Cys residues"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 30;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                              A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         to develop products for bone reduction disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
```

δã

6 KPQVTRG 12

Indels

0,

Gaps

```
RESULT
RO6020
ID RO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 5
Query Match
Best Local S
Matches 5
                                                                                                                                                                                                                                            26-JUN-1989;
19-DEC-1988;
06-JAN-1989;
06-JAN-1989;
                                                                                                                                                                                                               (PRAX-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A peptide which inhibits binding of adhesion mols, to cells expressing integrins may comprise two subunits having the sequence below, held together by an interchain stable bond. The sequence RGD is in each of the subunits.
                                               Sequence
                                                                          Peptides derived from outer membrane, encoding homo/heterologous product such as a antigen-flagelin fusion protein, are useful in eliciting a strong and wide ranging immune response against most
                                                                                                                                                                                                                                                                                                                                                                       Meningococcal
Class I outer
                                                                                                                                                                                                                                                                                                                                                                                                  Oligopeptide, antigenic to N.menigitidis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            R06020 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim
                                                                                                                  Claim 50;
                                                                                                                                   Meningococcus class 1 outer-membrane protein vaccine immunise against meningococcai disease.
                                                                                                                                                                WPI; 1990-224326/29
                                                                                                                                                                                     VANDERLEY
                                                                                                                                                                                              SEID
                                                                                                                                                                                                                                                                                                               28-JUN-1990.
                                                                                                                                                                                                                                                                                                                                  WO9006595-A.
                                                                                                                                                                                                                                                                                                                                                    Neisseria menincitidis.
                                                                                                                                                                                                                                                                                                                                                                                                                     20-NOV-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                         R06020;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                            19-DEC-1989;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5 CKPQVTRGDV 14
|:::||||
2 crrrrsrgdv 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12
                                                                                                                                                                                              ਨ
(2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   67;
Similarity
5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
5; Conserv
                                                                                                                                                                                                                PRAXIS BILOGICS IN.
RIJKINSINSI VOLKSGEZONDH.
                                                                                                                  Page 102; 120pp; English
                                                                                                                                                                                   PARADISO PR, POOLMAN JT, P, HECKELS JE, CLARKE IN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Page 69; 70pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              nilarity 50.0%;
Conservative
33.7%;
nilarity 71.4%;
Conservative
                                                11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                               A,
                                                                                                                                                                                                                                                                                                                                                                      membrane
                                                                                                                                                                                                                                                                                                                                                                                disease;
                                                                                                                                                                                                                                            89NL-0001612.

EBNL-0003111.

E9NL-0000030.

89NL-0000036.
                                                                                                                                                                                                                                                                                           89WO-US05678
                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein; 11 AA
                                                                                                                                                                                                                                                                                                                                                                       protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  English
Score 28; DB 11
Pred. Nc. 1e+02;
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 29; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                              HOOGERHOUT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           68;
                   DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2:
                                                                                                                                                                                              ט,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                               WIERTZ
                                                                                                                                               useful
                                                                                                                                                                                               틴
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 13
R76241
                                                                                                                                                                                                                                                                                     Y84806
                                                                                                                                                                                                                                                                                                        RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New nucleic acid encoding Fas protein without its trans-membrane region - and related vectors, transformed cells, transgenic animals, protein an antibodies, useful for control of Fas mediated apoptosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic peptides corresp. to the extracellular, transmembrane (TM) and truncated TM regions of fas proteins, given in R75239-respectively, were used to raise antibodies useful in detecting biologically important fas molecules.
                                                   Homo sapiens
                                                                                   Tumour necrosis factor; TNF; TNF inhibitory protein; TIP; TIP-B1; TNF-induced cell lysis; TNF-induced apoptosis; cytolytic; septic chronic inflammation; arthritis; cancer; cachexia; autoimmune dis
                                                                                                                                                       Internal peptide of tumour necrosis factor inhibitory protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    W09513701-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  06-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R76241 standard; Peptide; 12
Misc-difference
                                                                                                                                                                                              08-AUG-2000
                                                                                                                                                                                                                                                                    Y84806 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15-NOV-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15-NOV-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26-MAY-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fas-delta-TM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human Fas peptide 147-152/174-179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (LXRB-) LXR BIOTECHNOLOGY INC
                                                                                                                                                                                                                                                                                                                                                          N
                                                                                                                                                                                                                                                                                                                                                                                           4 ECKPOVTRGDV 14
                                                                                                                                                                                                                                                                                                                                                          :|| :| | :|
kckeevkrkev 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           qpqvtng
                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Kiefer MC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fig.4; 38pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               93US-0152443.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                94WO-US13173.
Location/Qualifiers
                                                                                                                                                                                                                                                                   peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                               33.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Shapiro JP;
                                                                                                                                                                                                                                                                    12
                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 28; DB 16;
Pred. No. 1.1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        transmembrane
ven in R75239-41,
                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                   autoimmune disease.
                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein and
                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                       shock;
                                                                                                                                                                                                                                                                                                                                                                                                                            0;
ACC XXX ACC XX
                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
R95959
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 4
                                                                                                                                                                                       Signal peptide; alpha-factor; dipeptidyl aminopeptidase processing; proteolysis; yeast; aprotinin; tissue factor pathway inhibitor; ILGF-I; protease inhibitor; insulin-like growth factor I; ILGF-II; interleukin; human growth hormone; bowine growth hormone; glucagon-like peptide-1; tissue plasminogen activator; glucagon; Factor VII; Factor VIII; insulin Factor XIII; platelet derived growth factor; insulin precursor.
                17-JUN-1994;
                                                                                                                                                                                                                                                                                                                     Heterologous
                                                                                                                                                                                                                                                                                                                                                                                                                          R95959 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 2; Page 16; 47pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     04-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       03-MAY-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EP997475-A1
                                                 16-JUN-1995;
                                                                                     28-DEC-1995.
                                                                                                                      WC9535384-A1
                                                                                                                                                       Synthetic
                                                                                                                                                                                                                                                                                                                                                        08-AUG-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  diseases and septic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Berleth E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  inflammation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (HEAL-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                               15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 pqivngdqy 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   POVTRGDVF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2000-305801/27.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HEALTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ehrke JM,
                                                                                                                                                                                                                                                                                                                   protein N-terminal extension #24.
                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15
                94DK-0000712
                                                 95WO-DK00250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RES INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98US-0157910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98EP-0123140
                                                                                                                                                                                                                                                                                                                                                                                                                            peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    shock.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          33.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                            13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2
                                                                                                                                                                                                                                                                                                                                                                                                                            A
```

```
Y84804-06 represent internal peptides of a tumour necrosis factor (TNF) inhibitory protein (TIP) designated TIP-B1. The TIP-B1 protein has a molecular weight of 27 kD, and which, upon introduction into the extracellular region of surrounding cells, is capable of inhibiting the action of TNF upon those cells. TIP-B1 is useful for inhibiting the action of TNF upon a cell to ablate e.g. TNF-induced cell lysis. TNF-induced appptosis and cytolytic effects. TIP-B1 can therefore be used to treat TNF-mediated diseases such as chronic inflammation, arthritis, cancer (cachexia), autoimmune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tumour necrosis factor inhibitory protein B1 capable of inhibiting action of tumor necrosis factor upon introduction into the extracellular region of cells, useful for treating e.g. chronic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note= "unspecified amino acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nadadur S,
Score 28; DB Pred. No. 1.1e 2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gurtoo H,
                              DB 21;
1.1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Henn A,
                                                            Length 12;
   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mihich
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ħ
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the
```

```
Search completed: March 6, 2001, 09:48:41 Job time: 163 sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CC R87060-R87082 and R95959 represent possible N-terminal extensions for cheterologous proteins (HP) in yeast. The N-terminally expended HP has a CC signal peptide (such as the alpha-factor signal peptide, see R87059), a cc leader sequence and a yeast processing site attached to its N-terminus. The DNA encoding this construct is then inserted into a recombinant cc expression vector which is used to transform a yeast strain capable of cxpressing the heterologous protein. The yeast processing site, contained within the N-terminal extension, enables the leader sequence cand signal peptide to be removed. The N-terminal extension of the HP cincreases the fermentation yield and protects against dipeptidyl caminopeptidase processing. The extension can be cleaved off either by naturally occurring yeast proteases before purification from the culture cmedia or by in vitro proteolysis during or subsequent to purification of the product. These constructs can be used to obtain higher yields of correctly processed proteins such as aprotinin, tissue factor pathway cinhibitor, protease inhibitors, insulin-like growth factor I (ILGF-I), cc activator, glucagon, glucagon-like peptide-1, Factor VII, Factor VIII,
                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA construct for expressing N-terminally extended heterologous protein in yeast - enabling higher yield of correctly processed proteins such as growth hormone, interleukin, tissue plasminogen activator and insulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Brandt J, Kjeldsen TB,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               activator, glucagon, glucagon-like peptide-1, Factor VII, Factor Factor XIII, platelet derived growth factor, enzymes, insulin,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example 11; Page 28; 79pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (NOVO ) NOVO-NORDISK AS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      insulin precursor.
                                                                                                                                                                                                                                         3 AECKPOVTR 11
                                                                                                                                                                                                        aeaepkatr 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13 AA;
                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                33.7%; Score 28; DB 17; Length 13; 55.6%; Pred. No. 1.2e+02; tive 2; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Vad K;
                                                                                                                                                                                                                                                                                                                                                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        or an
                                                                                                                                                                                                                                                                                                                                                                    ö
```

밁 Š

*

```
Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                      Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Minimum DB seq length: 0
Maximum DB seq length: 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                        Score
    Issued_Patents_AA:*

1: /cgn2_6/ptodata/2/iaa/5A_COMB.pep:*
2: /cgn2_6/ptodata/2/iaa/5B_COMB.pep:*
3: /cgn2_6/ptodata/2/iaa/6_COMB.pep:*
4: /cgn2_6/ptodata/2/iaa/PCTUS_COMB.pep:*
5: /cgn2_6/ptodata/2/iaa/Packfiles1.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-081-522-8
83
1 YTAECKPQVTRGDV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         March 6, 2001, 09:47:08; Search time 12.67 Seconds (without alignments) 21.259 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  174772 seqs, 17957048 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GenCcre version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        YTAECKPQVTRGDVF
                                                                                                                                                                                                                                                                                                                                                                                                        Length
     US-08-210-715-8
US-08-321-655-8
US-08-321-655-6
US-08-303-052A-6
US-08-421-695A-6
US-08-421-695A-6
US-08-421-695A-6
US-08-421-695A-6
US-08-763-458-29
PCT-US91-08328-10
US-08-152-443A-22
US-08-152-443A-22
US-08-152-443A-22
US-08-153-458-9
US-08-163-458-9
US-08-163-458-9
US-08-763-458-9
US-08-763-458-9
US-08-763-458-9
US-08-763-458-9
US-08-763-458-9
US-08-763-458-9
US-08-763-458-7
US-08-763-458-7
US-08-763-458-7
US-08-763-458-7
                                                                                                                                                                                                                                                                                                                                                                                                                                              SUMMARIES
Sequence 8, Appli
Sequence 6, Appli
Sequence 20, Appli
Sequence 22, Appli
Sequence 22, Appli
Sequence 24, Appli
Sequence 27, Appli
Sequence 34, Appli
Sequence 34, Appli
Sequence 34, Appli
Sequence 34, Appli
Sequence 37, Appli
Sequence 16, Appli
Sequence 17, Appli
Sequence 18, Appli
Sequence 17, Appli
Sequence 18, Appli
Sequence 3, Appli
Sequence 53, Appli
                                                                                                                                                                                                                                                                                                                                                                                                     Description
```

; MOLECULE TYPE: F ; HYPOTHETICAL: NO ; ANTI-SENSE: NO ; FRAGMENT TYPE: 1 US-08-210-715-8

TELEFAX: (613) 554-6312 INFORMATION FOR SEQ ID NO: 8: SEQUENCE CHARACTERISTICS:

15 amino acids linear ő peptide

LENGTH: 15 anino a TYPE: amino acid STRANDEDNESS: sing TOPOLOGY: linear

REFERENCE/DOCKET NUMBER: TE TELECOMMUNICATION INFORMATION: TELEPHONE: (519) 554-2937

Ł

TSRI 419.0

Query Match 100.0%; Score 83; DB 1; I Best Local Similarity 100.0%; Pred. No. 1.5e-07; Matches 15; Conservative 0; Mismatches 0;

Length 15 Indels

0

RESULT 1 US-08-210-715-8 Sequence 8, A Patent No. 57 GENERAL INFO APPLICANT: APPLICANT: APPLICANT: APPLICANT: APPLICANT: CORRESPOND ADDRESSE ADRESSE ADRESSE APPLICATE COMPUTER APPLICAT APPLICA	444444 3300 44444 5400 600 600 600 600 600 600 600 600 600
5 - 8 5 - 8 6	26 31.33 26 31.33 26 31.33 26 31.33 26 31.33
POLICATION US/08210715 3230 MATION: Brooks, Peter Brooks, Peter Cheresh, David A VENTION: METHODS AND VENTION: METHODS AND VENTION: INFESTION O EQUENCES: Office of Patent Co : Research Institute 10665 No. 5753230th To Jolia JOSA JOSEPH FORM: PE: Floppy disk IBM PC Compatible SYSTEM: PC-DOS/MS-DO PatentIn Release #1. LICATION DATA: ON NUMBER: US/08/210, ME: 18-MAR-1994 ARTION: 514 ENT INFOMATION: tting, Thomas 10N NUMBER: 34,163 10N NUMBER: 37,163 10N NUMBER: 37,163 10N NUMBER: 37,163	11122000000° 4422200000000° 33322221111111
O715 AND CO ION OF ION OF the	US-08-303-052 US-08-303-052 US-08-421-696 US-08-421-697 US-08-421-697 US-08-421-698 US-08-421-698 US-08-421-695 US-08-742-243 US-08-742-243 US-08-742-243 US-08-742-243 US-08-807-992 US-08-807-992 US-08-807-992
OSITIONS GIOGENESS 1, The Sc Pines RC Pines RC	3-052A-72 3-052A-99 11-696A-99 11-697A-99 11-697A-99 11-695A-100 11-695A-142 12-243-65 22-243-65 22-243-65 22-243-67 29-2B-12
USEFUL FOR S rripps ad, TPC-8	Sequence
•	1100 1100 1100 1100 1100 1100 1100 110
	Appl Appl Appl Appl Appl Appl Appl Appl

Ş

YTAECKPOVTRGDVF 15

```
밁
                                                                                                                                                                                            ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                       ; ANTI-SENSE: NO; FRAGMENT TYPE: US-08-366-665-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 2
US-08-366-665-8
                                                                                                       RESULT 3
US-08-421-702A-6
                                                                                                                                                                                                      Query Match
Best Local Similarity 1000
Thes 15; Conservative
                                                                         Sequence 6, Application US/08421702A Patent No. 5759996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 8,
                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: (619) 554-63 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
LENGTH: 15 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REGISTRATION NUMBER: 34,163
REFERENCE/DOCKET NUMBER: TS
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619) 554-2937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 18-MAR-1994 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/210,715
FILING DATE: 18-MAR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOTTWARE: PatentIn Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                   HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: METHODS AND COMPOSITIONS USEFUL FOR TITLE OF INVENTION: INHIBITION OF ANGIOGENESIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 30 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                               TYPE: amino acid
STRANDEDNESS: si
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY: USA
ZIP: 92037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE:
                                                                                                                                                                   YTAECKPQVTRGDVF 15
                                                                                                                                                                                                 YTAECKPOVTRGDVF 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    La Jolla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Application US/08366665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   E: Research Institute
10666 No. 5766591th Torrey Pines Road, TPC-8
                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cheresh, David A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Brooks, Peter
              Ingram, Ronald
Mullen, Daniel
                                            Cheng,
                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                 .. peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Office of Patent Counsel, The Scripps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Research
                                                                                                                                                                                                                                                                                                                       internal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JMBER: US/08/366,665
30-DEC-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            554-6312
                                                                                                                                                                                                                                            100.0%;
Juerg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Release #1.0, Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                               œ
..
                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TSRI 419.1
                                                                                                                                                                                                                                               Score 83; DB 1;
Pred. No. 1.5e-07
                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                              Length 15
                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                               0
```

```
RESULT 4
US-08-303-052A-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-421-702A-6
                                                                                                                                                                                                                                                                                                                                                      Sequence 6, Apprince 5770565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: (619) 535-89
                                                                                                                                                                                                                                                                             APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCE ADDRESS:

CORRESPONDENCE ADDRESS:

ADDRESSES: Campbell & Flores LLP

ADDRESSES: 7 - Jolla Village Drive, Suite 700
               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IEM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                        CORRESPONDENCE ADDRESS:
ADDRESSEE: Campbell & Flores LLP
STREET: 4370 La Jolla Village Drive, Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS:
LENGTH: 9 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE/DOCKET NUMBER: P-
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619) 535-9001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 08-SEP-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                            TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity hes 7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 1:
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: amino TOPOLOGY: 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 VTRGDVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9 VIRGDVF 15
                                                                                                                  92122
                                                                                                                                               San Diego
California
                                                                                                                                                                                                                                                                                                                                                                          Application US/08303052A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Campbell, Cathryn A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                USA
                                                                                                                              United States
                                                                                                                                                                                                                                                                            Tschopp, Juerg
                                                                                                                                                                                                                                                                                       Ingram, Ronaid
Mullen, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                             Cheng, Soan
 NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12-APR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     535-8949
                                                                                                                                                                                                                                                            Peptides for Reducing or Inhibiting Bone
                                                                                                                                                                                                                                                                                                             Ronald
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         43.4%;
100.0%;
                                                                                                                                                                                                                              Resorption
113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Peptides Useful for Altering Alpha-
v Beta-3-Mediated Binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US 08/303,052
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US/08/421,702A
US/08/303,052A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     31,815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    P-LA 1480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 36;
Pred. No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŏ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.3e+05;
es 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
```

0;

```
US-08-421-696A-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 6, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                              APPLICATION NUMBER: US 08/303
FILING DATE: 08-SEP-1994
ATTORNEY/AGENT INFORMATION:
NAME: Campbell, Cathryn A.
REGISTRATION NUMBER: 31,815
REFERENCE/DOCKET NUMBER: P-LA
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Ingram, Ronald APPLICANT: Mullen, Dandel APPLICANT: Tschopp, Juerg TITLE OF INVENTION: Use of TITLE OF INVENTION: Beta-3-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
APPLICANT: Cheng, Soan
                                                                                    TELEFAX: (619) 535-8949 INFORMATION FOR SEQ ID NO: 6:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                        CLASSIFICATION: 514
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTORNEY AGENT INFORMATION:
NAME: Campbell, Cathryn A.
REGISTRATION NUMBER: 31,815
                                                  SEQUENCE CHARACTERISTICS:
LENGTH: 9 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
LENGTH: 9 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REGISTRATION NUMBER: 31,815
REFERENCE/DOCKET NUMBER: P-LA 1132
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619) 535-9001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
APPLICATION NUMBER:
   MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: JS/08/421,696A FILING DATE: 12-APR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CITY: San Diego
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                    TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 VTRGDVF 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9 VTRGDVF 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           amino acid
                                 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/08421696A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    E: Campbell & Flores LLP
4370 La Jolla Village Drive, Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                  USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (619)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                      (619) 535-9001
   peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13-APR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     08-SEP-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           535-8949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Use of Peptides for Altering alpha-v
Beta-3-Mediated Binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     43.4%; Score 36; 100.0%; Pred. No.
                                                                                                                                                                                                                                        US 08/303,052
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OS 08/227,316
                                                                                                                                                      P-LA 1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 1;
1.3e+05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                   밁
                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
RESULT 7
US-08-421-698A-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
```

밁

```
Query Match
Best Local Similarity
Watches 7; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 6
US-08-421-697A-6
                                                                                                                         US-08-421-697A-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-421-696A-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 5,
Patent No. 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match,
Best Local Similarity
                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/421,697A
FILING DATE: 1.2-APR-1995
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/227,316
FILING DATE: 13-APR-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 03/303,052
FILING DATE: 08-SEP-1994
                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                             REFERENCE/DOCKET NUMBER: 9-1
TELECOM/UNICATION INFORMATION:
TELEPHONE: (619) 535-9001
TELEPHONE: (619)
                                                                                                                                                                                                                                                                                           FILING DATE: 08-SEP-1994
ATTORNEY/AGENT INFORMATION:
NAME: Campbell, Cathryn A.
                                                                                                                                       MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET: 4370 La Jo
CITY: San Diego
STATE: California
                                                                                                                                                       TOPOLOGY:
                                                                                                                                                             LENGTH: 9 amino a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9 VTRGDVF 15
1 VTRGDVF 7
                       9 VTRGDVF 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INFORMATION:
CANT: Cheng, Soan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Application US/08421697A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5: Campbell & Fiores LLP
4370 La Jolla Village Drive, Suite 700
                                                                                                                                                                                  9 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  USA
                                                                                                                                                                                                                          (619) 535-8949
                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tschopp, Juerg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mullen, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ingram,
                                                                                                                                       peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Resorption
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Use of Peptides for Altering Bone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ronald
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      43.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                138
                                                                                                                                                                                                                                                                                                                                                                                                                                             US/08/421,697A
                                                    %; Sccre 36; DB
%; Pred. No. 1:3
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 36;
Pred. No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                        1:3e+05;
Thes 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1.3e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 1;
                                                                              Length 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                     Gaps
                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
В
                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
"hes 7; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; TOPOLOGY: linear; MOLECULE TYPE: peptide US-08-421-698A-6
                                                                                                                                                                                                                                                                        US-08-421-695A-6
                                                                                                                                                                                                                                         Sequence 6, Patent No. !
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/303,052
FILING DATE: 08-SEP-1994
ATTORNEY/ACENT INFORMATION:
NAME: Campbell, Cathryn A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                             TITLE OF INVENTION: Peptides for Altering Bone Resorption.
TITLE OF INVENTION: Anglogenesis and Restenosis
NUMBER OF SEQUENCES: 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS
                                                                                                  CORRESPONDENCE ADDRESS:
                                                                                                                                                           APPLICANT:
                                                                                                                                                                                          APPLICANT: Cheng, Soan APPLICANT: Ingram, Rona
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/0: FILING DATE: 12-APR-1995 CLASSIFICATION: 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE/DOCKET NUMBER: 31
                                     STATE:
                                                                    STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                    9 VTRGDVF 15
                                                                                 DDRESSEE:
                                                                                                                                                                                                                                           , Application US/08421695A 5849865
xx: United States
92122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            , Application US/08421698A 5807819
                                  San Diego
California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       San Diego
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        California
                                                               E: Campbell & Flores LLP
4370 La Jolla Village Drive, Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    E: Campbell & Flores LLP
4370 La Jolla Village Drive, Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mullen, Daniel
                                                                                                                                                      Tschopp, Juerg
                                                                                                                                                                           Mullen, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (619) 535-8949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tschopp,
                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cheng, Soan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (619) 535-9001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cathryn A.
BER: 31,815
                                                                                                                                                                                        Ronald
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Resorption
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ronald
                                                                                                                                                                                                                                                                                                                                                                                                                   43.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Peptides Useful for Altering Bone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Juerg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US/08/421,698A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>ن</u>
                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P-LA 1481
                                                                                                                                                                                                                                                                                                                                                                                                                   Score 36;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                     .3e+05
                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 9;
                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                   0
```

```
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PCT-US95-04741-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: (619) 535-894
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-00S/MS-DOS
                REFERENCE/DOCKET NUMBER: FP
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619) 535-9001
                                                                  PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/303,052
APPLICATION NUMBER: US 08/303,052
FILING DATE: 08-SEP-1994
ATTORNEY/AGENT INFORMATION:
NAME: Imbra, Richard J.
RESISTRATION NUMBER: 37,643
                                                                                                                                                                            PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0
FILING DATE: 13-APR-1994
                                                                                                                                                                                                                                                                                   SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REGISTRATION NUMBER: 31,815
REFERENCE/DOCKET NUMBER: P-
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619) 535-9001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
NAME: Campbell, Cathryn A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: Patentin Rel CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: FILING DATE: 12-AP
                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET: 4370 La
CITY: San Diego
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: amino acid
TOPOLOGY: circul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US/08/421,695A FILING DATE: 12-APR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity es 7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Application PC/TUS9504741
                                                                                                                                                                                                                                                                                                                                                                                                                              California
                                                                                                                                                                                                                                                                                                                                                                                                                                                              4370 La Jolla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    La Jolla Cancer Research Foundation
VENTION: Peptides for Reducing or Inhibiting Bone
VENTION: Resorption, Anglogenesis and Restenosis
 (619)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                circular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Campbell and Flores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Floppy disk
                                                                                                                                                                                                                                              UMBER: PCT/US95/04741
_12-APR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            peptide
535-8949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       535-8949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Release #1.0, Version #1.25
                                                                                                                                                                                                US 08/227,316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          31,815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Village Drive, Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 36;
Pred. No
                                                     FP-LA 1476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P-LA 1478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.3e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

Š

```
Query Match
Best Local Similarity
"---has 7; Conserve
                            RESULT 11
US-08-763-458-29
                                                                                       뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PCT-US95-04741-6
Sequence 29, Application US/08763458 Patent No. 6117839
                                                                                                                                             Matches
                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       equence 28, Application US/08763458 stent No. 6117839
                                                                                                                                                                                                                                                                                                        INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                               REGISTRATION NUMBER: 25,258
REFERENCE/DOCKET NUMBER: 79
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202)672-5300
TELEPAX: (202)672-5399
                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/467,074
FILING DATE: 07-JUN-1995
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY: linear MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: BONE STIMULATING FACTOR NUMBER OF SEQUENCES: 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
                                                                                                                                     Jocal Similarity 83.3%; res 5; Conservation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 11 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9 VTRGDVF 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE:
                                                                                     5 HTAECK 10
                                                                                                                1 YTAECK 6
                                                                                                                                                                                                                                                                           ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 VTRGDVF 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20007-5109
                                                                                                                                                                                                                                                      : 10 amino acids
amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     amino acid
                                                                                                                                                                                                                                                                                                                      904136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3000 K Street, N.W., Suite 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           UMBER: 3S/08/763,458
11-DEC-1996
                                                                                                                                                                                                                                             single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 36; DB 4;
Pred. No. 1.3e+
                                                                                                                                                            Score 30; D
Pred. No. 37
                                                                                                                                                                                                                                                                                                                                                                            79997/118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .3e+05
                                                                                                                                                                          Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 9;
                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ς;
                                                                                                                                             9
                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                               PCT-US91-08328-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
APPLICANT: TAM, C
                                                                                                                                                                                                                                                                                                                 equence 10, Application PC/TUS9108328
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
COMPUTER READABLE FORM:
MEDIUM TYPE: 'Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION UNMBER: PCT/US91/08328
FILING DATE: 19911107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
APPLICATION NÜMBER: US 08/487,074
FILING DATE: 07-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER-OF INVENTION:
                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                        TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELECOMMUNICATION INFORMATION:
                                                                                                                             COUNTRY: USA:
ZIP: 10154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
tes 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/0 FILING DATE: 11-DEC-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                           STATE: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: WEGNER, Harold C
REGISTRATION NUMBER: 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                          CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE:
                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                5 HTAECK 10
                                                                                                                                                                                                                                                                                                                                                                                                                                  1 YTAECK 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      amino aci
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20007-5109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     90413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10 amino acids
nino acid
                                                                                                                                                                                            345 Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3000 K Street, N.W., Suite 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (202)672-5300
                                                                                                                                                                                                                                                                                    Ruggeri, Zaverio M.
Houghten, Richard A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TAM, Cherk Shing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PatentIn
                                                                                                                                                                                                         Eugene Moroz, MORGAN & FINNEGAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Foley & Lardner
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       single
                                                                                                                                                                                                                                                        OF ADHESION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           36.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BONE STIMULATING FACTOR
                                                                                                                                                                                                                                                      PEPTIDES THAT INHIBIT PLATELET BINDING OF ADHESION MOLECULES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US/08/763,458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 30;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                79997/118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
```

0;

PRIOR APPLICATION DATA:

CLASSIFICATION:

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; PUBLICATION DATE: PCT-US91-08328-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                         Sequence 22, Application US/08444231
Patent No. 5652210
                                                                                                                                                                                                                                                                                                                                                                                                                          08-444-231-22
                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
SOFTWARE: Patentin Release #1.0, CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/444,231 FILING DATE: 18-MAY-1995 CLASSIFICATION: 530
                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                       APPLICANT: BARR, FILL.
APPLICANT: SHAPIRO, JOHN P.
APPLICANT: KIEFER, MICHAEL C.
APPLICANT: KIEFER, MICHAEL C.
APPLICANT: MYENTION: NOVEL FAS PROTEIN AND METHODS OF USE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE/DOCKET NUMBER: 11
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DOCUMENT NUMBER: US B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE: peptide HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PUBLICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ANTI-SENSE:
                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
nes 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                                                                                                       CITY: Palo Alto
STATE: Californ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 28-0 PUBLICATION DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DOCUMENT NUMBER: US 4,683,291
FILING DATE: 28-OCT-1985
PUBLICATION DATE: 28-JUL-1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REGISTRATION NUMBER: 25,237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US 07/610,363 FILING DATE: 07-NOV-1990
                                                                                                                                                                                                                   STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEX: 421792
                                                                                                                                                                    COUNTRY:
                                                                                                                                                                                                                                    DDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5 CKPQVTRGDV 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY: Cross-links
LOCATION: 2..>11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 CRRRRSRGDV 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 YPE: AMINO ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ENGTH:
                                                                                                                                                      94304-1018
                                                                                                                                                                                    California
                                                                                                                                                                                                                755 Page Mill Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11 amino acids
                                                                                                                                                                    USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  : (212)758-4800
(212)751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ĕ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                unknown
                                                                                                                                                                                                                                      MORRISON & FOERSTER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eugene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7R: US B1 4,683,291
28-OCT-1985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            03-JUL-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          34.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note= "Multimers of sequence
linked by interchain disulfide bonds at Cys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               residues"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1198 4079PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 29; DI
Pred. No. 59
                                                                  Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

```
RESULT 14
US-08-152-443A-22
; Sequence 22, App
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-444-231-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 33.7%;
Best Local Similarity 45.5%;
Matches 5; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION: APPLICANT: BARR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       atent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION FOR SEQ ID NO:
                                                                   NFORMATION FOR SEQ ID NO:
                                                                                                                                                                                             FILING DATE: 15-NOV-1993
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
LENGTH: 12 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REGISTRATION NUMBER: 33,943
REFERENCE/DOCKET NUMBER: 23647-20006.00
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 813-5600
TELEPAX: (415) 494-0792
                                                                                                              REGISTRATION NUMBER: 33,943
REFERENCE/DOCKET NUMBER: 23
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 813-5600
                                                                                                                                                                                                                                                           COMPUTER: IEM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOETWARE: Patentin Release #1.0, CURRENT APPLICATION DATA:
                SEQUENCE CHARACTERISTICS:
LENGTH: 12 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
                                                                        TELEFAX: 706141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: 706141
                                                                                                                                                                                                                                                                                                                                                            COUNTRY: USA
ZIP: 94304-1018
                                                                                                                                                                                                                                                                                                                                                                                          CITY: Palo Alto
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TLE OF INVENTION:
 STRANDEDNESS:
                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRANDEDNESS:
TOPOLOGY: lir
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4 ECKPOVTRGDV 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 KCKEEVKRKEV 12
                                                                                                                                                                                 LEHNHARDT, SUSAN K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LEHNHARDT, SUSAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Application US/08152443A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SHAPIRO, JOHN P.
KIEFER, MICHAEL C.
NVENTION: NOVEL FAS PROTEIN AND METHODS OF
                                                                                                                                                                                                                                                                                                                                                                                                                            755 Page Mill
                                                                                             (415) 494-0792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                           MORRISON &
                                                                                                                                                                                                                         UMBER: US/08/152,443A
15-NOV-1993
single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PHILIP J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          THEREOF
                                                                                                                                                                                                                                                                            Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US 08/152,443
                                                                                                                                                                                                                                                                                                                                                                                                                                         FOERSTER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 28; Pred. No.
                                                                                                                                                 23647-20006.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>;</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
```

```
Search completed: March 6, 2001, 09:48:57 Job time: 109 sec
                                                                                   망
                                                                                                                    δ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 15
US-08-014-426-54
                                                                                                                                                                                                                                       ; MOLECULE TYPE:
; HYPOTHETICAL:
US-08-014-426-54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 33.7%;
Best Local Similarity 45.5%;
Matches 5; Conservative
                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -08-v1-
Sequence 54, AFF1-
Sequence 54, AFF1-
No. 5512435
                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                             TELEFAX: (415) 326-24 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: PATEN: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION UMBER: US/08/014,426
FILING DATE: 05-FEB-1993
CLASSIFICATION: 435
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Bhatt, Ramesh
APPLICANT: Dower, William
TITLE OF INVENTION: RECEPTOR-BINDING ANTIPROLIFERATIVE
TITLE OF INVENTION: PETILES
NUMBER OF SEQUENCES: 65
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
LENGTH: 8 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
NAME: Smith, Willaim M
REGISTRATION NUMBER: 30,223
REFERENCE/DOCKET NUMBER: 5490A-204
                                                                                                                                                                                                                                                                                                                                                                                                             TELECOMMUNICATION INFORMATION: TELEPHONE: (415) 326-2400
                                                                                                                                                                                                                                                                                          TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY: UZIP: 94301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET: 379 Lytton Avenue CITY: Palo Alto
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4 ECKPQVTRGDV 14
:|| :| | :|
2 KCKEEVKRKEV 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                    1 YTAECK 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Application US/08014426
                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Renschler, Markus F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Levy, Ronald
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Townsend and Townsend Khourie and Crew
                                                                                                                                                                                                                                                                                                                                                                      5) 326-2422
, 326-2422
, NO: 54:
                                                                                                                                                    ; Score 27; DB
; Pred. No. 1.3e
2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 28; DB 1;
Pred. No. 93;
3; Mismatches
                                                                                                                                                                                     DB 1; Length 8;
                                                                                                                                    .3e+05;
es 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3; Indels
                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                    Gaps
                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0,
```

THIS PAGE BLANK (USPTO)

\$:

```
Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      seq length: 0 seq length: 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PIR_66:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-081-522-8
83
1 YTAECKPQVTRGDV
          BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        March 6, 2001, 09:47:33; Search time 13.92 Seconds (without alignments) 73.169 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  195891 seqs, 67900655 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             YTAECKPOVTRGDVF 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BB
     84.2459
RHLMGS
RHLMGS
RHLMGS
S456606
PH1.5389
S466606
PH1.537
PQ0017
PC7075
PQ0017
PC7075
PQ0017
PC7075
PC7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ٠.
antl protein - pha
alpha-adaptin - bo
gonadoliberin - se
heat shock protein
r-cell receptor be
urease (EC 3.5.1.5
quinoline 2-oxidor
Ig H chain V.D-J r
guanylate cyclase
terminal protein -
endo-1,3-beta-gluc
retinal oxidase -
urotensin II - tel
unidentified 3310
neurotensin-relate
milk band B protei
epidermal growth f
hypothetical MNI/I
kidney and bladder
antibiotic GE2270
Ig H chain V-D-J r
fil3 ligand isofor
hypothetical peptil
low density lipopr
s-allele-associate
lutropin beta chai
blecmycin Drodos1 -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Description
```

• •

RESULT

cein 30. ity 57. servative	ne (fragment) genius taurus (cattle) sequence_revision 05-Apr-1995 #text_ sequence_re	Qy 6 KPQVTRGDV 14 Db 3 KPLVTRNDI 11	Query Match 39.8%; Score 33; DB 2; Length Best Local Similarity 65.7%; Pred. No. 12; Matches 6; Conservative 1; Mismatches 2; Ind	Cell 62, 591-586, 1930 A;Title: The c4 repressors of bacteriophages Pl and P7 are a A;Reference number: 342448; MUID:90335968 A;Accession: S42449 A;Status: preliminary; translation not shown A;Molecule type: DNA A;Residues: 1-11 <city a;cross-references:="" embl:m35139;="" nid:g215705;="" pidn:aaa32437.<="" th=""><th>guence_revision 26-May-1995 #text u</th><th>ALIGNMENTS</th><th>30 18 21.7 15 2 S29487 31 17 20.5 8 2 157532 32 17 20.5 10 1 XAV16B 33 17 20.5 10 2 S66214 34 17 20.5 11 1 SPHO 35 17 20.5 11 2 S6196 36 17 20.5 11 2 C37196 37 17 20.5 11 2 C37196 38 17 20.5 11 2 C37196 39 17 20.5 12 2 D37196 40 17 20.5 12 2 D37196 41 17 20.5 13 2 T50173 42 17 20.5 14 2 S233803 43 17 20.5 14 2 S23396 44 17 20.5 14 2 S23996 45 17 20.5 14 2 A23996</th></city>	guence_revision 26-May-1995 #text u	ALIGNMENTS	30 18 21.7 15 2 S29487 31 17 20.5 8 2 157532 32 17 20.5 10 1 XAV16B 33 17 20.5 10 2 S66214 34 17 20.5 11 1 SPHO 35 17 20.5 11 2 S6196 36 17 20.5 11 2 C37196 37 17 20.5 11 2 C37196 38 17 20.5 11 2 C37196 39 17 20.5 12 2 D37196 40 17 20.5 12 2 D37196 41 17 20.5 13 2 T50173 42 17 20.5 14 2 S233803 43 17 20.5 14 2 S23396 44 17 20.5 14 2 S23996 45 17 20.5 14 2 A23996
h 9; dels 0; Gaps 0;	xt_change 05-Apr-1995 Wick, C.C.; Saito, A.; Wattersc assembly protein AP-2 are relat		gth 11; Indels 0; Gaps 0;	e antisense RNAs. 37.1; PID:g215707	_change 08-Oct-1999		GTP-binding protei gene TnIslow prote angiotensin-conver cartilage oligomer substance P - hors substance P - guin alcohol dehydrogen bradykinin-potenti bradykinin-potenti enterotoxin C-1 - tremerogen a-13 - alpha-2 collagen a-1ha cha beta-granin - rat acid phosphatase (

```
J. Biol. Chem. 261, 4812-4819, 1986
A;Title: Primary structure of gonadotropin-releasing hormone from lamprey brain.
A;Reference number: A01412; NUID:86158192
A;Accession: A01412
A;Molecule type: protein
A;Residues: 1-10 <SHED
C;Comment: This hormone was isolated from the brain.
C;Comment: This hormone was isolated from the brain.
C;Superfamily: gonadoliberin
C;Keywords: amidated carboxyl end; hormone; pyroglutamic acid
F;1/Modified site: pyrrolidone carboxylic acid (Gln) #status experimental
F;10/Modified site: amidated carboxyl end (Gly) #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             heat shock protein C62.5 homolog - Salmonella typhimurium (fragment) N;Alternate names: high temperature protein G C;Speckes: Salmonella typhimurium C;Date: 11-Mar-1998 #sequence_revision 17-Apr-1998 #text_change 17-Apr-1998 C;Accession: S70721 R;Oi, S.Y.; Li, Y.; Szyroki, A.; Giles, I.G.; Moir, A.; O'Connor, C.D. Mol. Microbiol. 17, 523-531, 1995
                                                                                                        allelic exclusion and antigen-specific repertoire. A; Reference number: PH0746; MUID:92078846 A; Accession: PH0765
                                                                                                                                                                                                                                                                                                                  RESULT
PH0765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Title: Salmonella typhimurium responses to a bactericidal protein from A;Reference number: S70719; MUID:96100451
A;Accession: S70721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
  C; Keywords:
                                       A;Molecule type: mRNA
A;Residues: 1-14 <CAS>
A;Cross-references: EMBL:X60859; NID:g51139; PIDN:CAA43249.1; PID:g51140
                                                                                                                                                                R;Casanova, J.L.; Romero, P.; Widmann, C.; Kourilsky, P.; Maryanski, J.L.
J. Exp. Med. 174, 1371-1383, 1991
A;Title: T cell receptor genes in a series of class I major histocompatibility complex.
                                                                                                                                                                                                                             C;Species: Mus musculus (house mouse)
C;Date: 17-Jul-1992 #sequence_revision 17-Jul-1992 #text_change 05-Nov-1999
C;Accession: PH0765
                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Experimental source: strain SL1344 C; Keywords: ATP binding; heat shock; molecular chaperone,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type: protein
A; Residues: 1-10 <QIS>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R;Sherwood, N.M.; Sower, S.A.; Marshak, D.R.; Fraser, B.A.; Brownstein, M.J. Biol. Chem. 261, 4812-4819, 1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C; Accession: A01412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C;Species: Petromyzon marinus (sea lamprey)
C;Date: 17-Mar-1987 #sequence_revision 17-Mar-1987 #text_change 18-Mar-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gonadoliberin - sea lamprey
N;Alternate names: gonadotropin releasing hormone (GnRH)
                     A; Experimental source: T lymphocyte
                                                                                                                                                                                                                                                                                            T-cell receptor beta chain (H1) - mouse (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          μ
                                                                                                                                                                                                                                                                                                                                                                                                  N
                                                                                                                                                                                                                                                                                                                                                                                                                                         σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3 YSLEWKP 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        YTAECKP 7
                                                                                                                                                                                                                                                                                                                                                                                                                                       KPOVTRG 12
T-cell receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
5; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                  œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26.58;
71.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 22;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 22; 1
Pred. No. 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          φ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 1;
9.5e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ).5e+02;
2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length: 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  neutroph
                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                             Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: protein
A; Residues: 1-15 <HUA>
C; Keywords: hydrolase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
A35389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
  A; Accession:
                                                                                                        C; Accession: PH1587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Molecule type: protein A; Residues: 1-11 <SCH>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Reference number: S66606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R; Schach,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C; Accession: S66606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C; Accession: A35389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Accession: S66606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                     3 AECKPQ 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    j...a
                                                                                                                                                                                                                                                                          6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7 PQVTR---GDVF 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 CASSSARGD 9
                                                                                                                                                                                                              α
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       σ
                                                                                                                                                                                                                                                                          AELKPR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PQISRQEYGGLF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CKPQVTRGD 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                          11
```

'n

```
R;Levinson, D.A.; Campos-Torres, J.; Leder, P.
J. Exp. Med. 178, 317-329, 1993
A;Title: Molecular characterization of transgene-induced immunodeficiency in B-less
                                                                                                        Ig H chain V-D-J region (wild-type clone 11) - mou:
C;Species: Mus musculus (house mouse)
C;Date: 02-Jun-1994 #sequence_revision 02-Jun-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Title: Morganella morganii urease: purification, characterization, and A;Reference number: &35389; MUID:90264298
A;Accession: &35389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eur. J. Biochem. 232, 536-544, 1995
A;Title: Quinoline 2-oxidoreductase and 2-oxo-1,2-dihydroquinoline 5,6-dioxygenase
A;Reference number: S66606; MUID:96035889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          quinoline 2-oxidoreductase alpha chain - Comamonas testosteroni (fragment)
C;Species: Comamonas testosteroni
C;Date: 15-Feb-1997 #sequence_revision 13-Mar-1997 #text_change 17-Mar-199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3; Hu, L.T.; Nicholson, E.B.; Jones, J. Bacteriol. 172, 3073-3080, 1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C;Species: Morganella morganii
C;Date: 31-Aug-1990 #secuence_revision 31-Aug-1990 #text_change 23-Jun-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  urease (EC 3.5.1.5) 63K chain - Morganella morganii (fragment)
A; Reference number: PH1580; MUID: 93301609
                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Experimental source: strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S.; Tshisuaka, B.; Fetzner, S.; Lingens,
                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25.9%;
41.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26.5%;
                                                                                                                                                                                                                                                                                                                                                                           25.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Jones,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 22;
Pred. Nc.
                                                                                                                                                                                                                                                                                                                                                                           Score 21; DB 2;
Pred. No. 1.6e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 21.5; DB 2;
Pred. No. 1.7e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .B.D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Lynch,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3e+03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 2;
                                                                                                                                                        mouse (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                    Ņ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           M.J.;
                                                                                                               #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #text_change 17-Mar-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 14;
                                                                                                                                                                                                                                                                                                                                                                                                Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mobley,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              H.L.T
                                                                                                                 17-Mar-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ښ
٠٠
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     isolation
                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            fr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

ŧ,

在水の水上門間野の一本門

```
RESULT
A60763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C; Species: Mus musculus (house mouse)
C; Date: 18-Aug-2000 #sequence_revision 18-Aug-2000
C; Accession: PC7075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: DNA
A; Residues: 1-12 <LEV>
A; Experimental source: bone
C; Keywords: immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                               R:Matsumoto, K.; Takano, H.; Kim, C.I.; Hirokawa, Gene 84, 247-255, 1999
A;Title: Primary structure of bactericphage M2 DN. A;Reference number: JQ0161; MUID:90128268
                                                                                                                                                                                                                                                                                                                                                                    C;Species: phage M2
C;Date: 07-Sep-1990 #sequence_revision
C;Accession: PQ0017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Experimental source: strain C57BL/6Cr Slc, C; Keywords: brain; phosphorus-oxygen lyase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: protein A; Residues: 1-14 <TSU>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Title: Proteome analysis of mouse A; Reference number: PC7072 A; Accession: PC7075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R:Tsugita, A.; Kawakami, T.; Uchida, T.; Electrophoresis 21, 1853-1871, 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       guanylate cyclase (EC
C; Species: Mus musculu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             문
endo-1,3-beta-glucanase (EC 3.2.1.-),
C;Species: Bacillus circulans
                                                                                    밁
                                                                                                              Ş
                                                                                                                                                                                                               C; Superfamily: phage PZA terminal protein
                                                                                                                                                                                                                                                                     A; Molecule type: DNA
A; Residues: 1-15 <MAT>
                                                                                                                                                                                                                                                                                                 A: Reference number: JQ0161;
A: Accession: PQ0017
                                                                                                                                                                                                                                                                                                                                                                                                               terminal protein
                                                                                                                                         Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 3
                                                                                                                                                                                                                                            Genetics:
                                                                                                                                                                                                                                                      Cross-references: GB:M33144; NID:g215507; PIDN:AAA32367.1; PID:g215508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11 RGDVF 15
                                                                                                                                                         Local Similarity
                                          11
                                                                                                              11 RGDV 14
                                                                                                                                                                                                                                                                                                                                                                                                                                           10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      æ
                                                                                    G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9 VTRGDVF 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4 RGDLY 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  l Similarity
3; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             similarity 42.
3; Conservative
                                                                                                                                           4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                               phage M2 (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4.6.1.2), soluble, alpha-1 chain -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       bone marrow
                                                                                                                                                      25.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 25.3%;
                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 21; DB
Pred. No. 1.7e
2; Mismatches
                                                                                                                                                         Score 21;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ψ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 21;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        pre-B lymphocyte
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  brain: Two-dimensional electrophoresis profiles of
                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                68k
                                                                                                                                                                                                                                                                                                                                                                                    07-Sep-1990 #text_change 20-Sep-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sakai, T.;
                                                                                                                                                                                                                                                                                                                            M2 DNA polymerase:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 2;
1.7e+03;
              Bacillus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               male;
                                                                                                                                                                     DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 2;
                                                                                                                                                         2.1e+03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>;</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               brain,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #text_change 18-Aug-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kamo, M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 12;
                                                                                                                                                                       Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 14;
              circulans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mouse (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 striatum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matsui, T.; Watanabe,
                                                                                                                                                                                                                                                                                                                             conserved
              (strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                           0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                           Gaps
              WL-12)
                                                                                                                                                                                                                                                                                                                             segments
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
              (fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
             Š
                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                           Š
```

```
A; Title: Cloning of two genes from Bacillus circulans A; Reference number: A60763; MUID: 91178514
A; Accession: A60763
A; Molecule two
                                                                                                        A:Accession: Autropage Protein
A:Molecule type: protein
A:Molecule type: protein
A:Mosidus: 1-12 CPEN>
A:Mote: the proposed sequence was confirmed by synthesis of a
A:Mote: The proposed sequence was confirmed by synthesis of a
                                                                                C;Superfamily: urotensin II
C;Reywords: neuropeptide; osmoregulation
F;6-11/Disulfide bonds: #status experimental
                                                                                                                                                                                                     R;Pearson, D.; Shively, J.E.; Clark, B.R.; Geschwind, I.I.; Proc. Natl. Acad. Sci. U.S.A. 77, 5021-5024, 1980 A;Title: Urotensin II: a somatostatin-like peptide in the ca A;Reference number: A01409; MUID:81054904 A;Accession: A01409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: protein A; Residues: 1-15 <FIS> C; Comment: This bacillus C; Keywords: glycosidase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C;Date: 14-May-1993 #sequence_revision 14-May-1993 C;Accession: A60763 \
                                                                                                                                                                                                                                                                                                              urotensin II - long-jawed mudsucker
C;Species: Gillichthys mirabilis (long-jawed mudsucker)
C;Date: 23-Oct-1981 #sequence_revision 23-Oct-1981 #text_change 15-Oct-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Accession: S60354
A; Status: preliminary
A; Molecule type: protein
A; Residues: 1-11 <HU3>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Biochim. Biophys. Acta 1243, 431-436, 1995
A; Title: Identification of essential lysyl
A; Reference number: S60354; MUID:95244596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  R; Huang, D.Y.;
Biochim. Bioph
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C;Species: Oryctolagus cuniculus (domestic rabbit)
C;Date: 24-Aug-1996 #sequence_revision 13-Mar-1997
                                                                                                                                                                                                                                                                                             C; Accession: A01409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C; Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     retinal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
Matches
                 Query Match
Best Local
 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                    5 HTXGCXP 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 YTAECKP 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      oxidase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3 PEVTSMEYF 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ~1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PQVTRGDVF 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       l Similarity
3; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
4; Conserv
Similarity 3; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S60354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ichikawa,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rabbit (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              produces up
hydrolase
                 24.1%;
75.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25.3%;
44.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 20; DB Pred. No. 2.3e 1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score
Pred.
Score 20; DB 1;
Pred. No. 2.5e+03;
1; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21; DB 2;
No. 2.1e+03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    six
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  different 1,3-beta-glucanases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 2;
2.3e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cysteinyl residues,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #text_change 07-May-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              u
س
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #text_change 13-Mar-1997
                                   Length 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WL-12 which
                                                                                                                                        is of a peptide with the same neurosecretory system and is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                             caudal neurosecretory syste
                                                                                                                                                                                                                                                                               Barkley, M.; Nishioka,
 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         encode 1,3-beta-glu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  amino ació
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  growth
                                                                                                                                          ⊬∙ છ
```

2 TAEC

```
밁
Search completed: March 6, 2001, 09:49:16
Job time: 103 sec
                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                       unidentified QR310007 protein - rice (fragment)
C;Speckes: Oryza sativa (rice)
C;Date: 28-May-1997 #sequence_revision 18-Jul-1997 #text_change 18-Jul-1997
C;Accession: PC4271
R;Kawakami, T.; Kamo, M.; Chen, M.C.; Tsugita, A.
submitted to JIPID, April 1997
A;Reference number: PC4267
A;Reference number: PC4271
A;Recession: PC4271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Molecule type: protein
A;Residues: 1-12 <BHA9.
C;Superfamily: urotensin II
C;Keywords: neuropeptide; osmoregulation
F;6-11/Product: urotensin II #status experimental <MAT>
                                                                                                                                                                                                                                                                                                                                                          A; Molecule type: protein A; Residues: 1-14 < KAW>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        urotensin II - telostean fish C;Species: telostean fish C;Date: 19-Mar 1997 #sequence. C;Date: S42765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bhaskaran, R.; Arunkumar, A.I.; Yu, C.
Hochim. Blophys. Acta 1199, 115-122, 1994
Title: NMR and dynamical simulated annealing studies on the solution conformation of
Reference number: $42765; MUID:94169160
                                                                                                                                                                                                                            Query Match
Best Local Similarity 57...
Matches 4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 24.1%; Score 20; DB 2; Length 12; Best Local Similarity 75.0%; Pred. No. 2.5e+03; Matches 3; Conservative 1; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 TAEC 5
||:|
3 TADC 6
                                                                                                                                                             7 PQVTRGD 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #sequence_revision 19-Mar-1997 #text_change 05-Dec-1997
                                                                                                                                                                                                                                 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Gaps
                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

```
Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                            Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Run
                                                                                                                                                                                                                                                                                                                                                                                                                                             Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Minimum DB seq length: 0
Maximum DB seq length: 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence:
                                                                                                                                                                                                                                                                                                                                                   ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        on:
    332098755443331098775544333109877554
                                                                                                                                                                                                                                                                                                                                                                                                 Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                  Score
                                                                                                                                                                                                      20
20
20
19
17.5
   BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          88757 seqs, 32294092 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-081-522-8
83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  March 6, 2001, 09:48:43; Search time 8.42 Seconds (without alignments) 57.531 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                           SwissProt_39:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           YTAECKPQVTRGDVF 15
                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                   멂
UC19_MAIZE
GORZ_LACLC
URE1_MORMO
GORZ_GILMI
UR2_FOLSP
UR2_GILMI
UR2_FOLSP
UR2_FOLSP
UR2_FILSALTY
PED1_HYDAI
OXYT_RAJCL
BPP2_BOTIN
BPP4_BOTIN
BPP4_BOTIN
BPP4_BOTIN
BPP4_BOTIN
BPP4_BOTIN
TKNA_HO3SE
UR12_CLOPA
TAT_HY1U2
TANI_HY1Z8
CDPB_FOAT
CXAL_CONG
TAT_HY1Z8
CDPB_CORDA
TAT_HELTI
ISOT_CYPCA
UPA6_HUMA
TKS1_AEDAE
FAR1_HELTI
USP6_BEDAE
CORZ_PERAM
CXAL_CONSTI
SMS_LALMI
ESTB_SCHGA
URAI_CONSTI
SMS_LALMI
ESTB_SCHGA
URAIZE
UR3C_MAIZE
                                                                                                                                                                                                                                                                                                                                                                                SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     705
                                                                                                                                                                                                                                                                                                                                                   Description
                                                                                                                                7 gillichthys
2 polyodon sp
7 pinus pinas
6 salmonella
8 hydra atten
4 raja clavat
2 bothrops ja
3 bothrops in
4 bothrops in
6 cquus cabal
0 tremella me
9 thoman immun
1 human immun
8 protopterus
conus geogr
1 helisoma tr
2 cyprinus ca
2 homo sapien
4 aedes aegyp
5 aedes aegyp
6 perilameta
1 conus stria
0 myoxocephal
1 alligator m
1 schizaphis
5 zea mays (m
                                                                                                                                                                                                                                                                             comamonas t
bacteriopha
                                                                                                                                                                                                                                                                                                 lactococcus
morganella
```

ALIGNMENTS

	RESULT GON1_P ID AC P DT 2 DT 2 DT 0 DE G	Qu Qy Ma	STTT DDCCCRRTTRRRRRRRR	RESULT ID UC19_M AC P AT P DT O DT U DT U DT U OC O
T . W H T	LT 2 _PSTMA GON1_PSIMA STANDARD; PRT; 10 AA.	Query Match 30.1%; Score 25; DB 1; Length 15; Best Local Similarity 55.6%; Pred. No. 1.6e+02; Matches 5; Conservative 0; Mismatches 4; Indels 0; Gaps 0; 2 TAECKPQVT 10 1	rin C., Damerval C de Vienne D.; gel protein datab1005(1996). 2D-GEL THE DETERMI W IS: 18.4 KDA. DPTILE.	LT 1 _MAIZE STANDARD; PRT; 15 AA. P80625; P80625 (Rel. 34, Created) 01-OCT-1996 (Rel. 34, Last sequence update) 15-UUI-1999 (Rel. 38, Last annotation update) UNKNOWN PROTEIN FROM 2D-PAGE OF ETIOLATED COLEOPTILE (SPOT 406) (FRAGMENT). Zea mays (Maize). Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Viridiplantae; Embryophyta; Poaceae; Zea

```
SQ FT
                                RESULT
URE1_M
                                                                                               Ş
                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                            밁
  Bar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 4
                                                                                                                       Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           brain.";
J. Biol. Chem. 261:4812-4919(1936),
-:- FUNCTION: STIMULATIES THE SECRETION OF BOTH
FOLLICLE-STIMULATING HORMONES.
-:- SIMILARITY: BELONGS TO THE GNRH FAMILY.
PIR; A01412; RHLMGS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LACIC
_MORMO
URE1_MORMO
P17337;
01-AUG-1990
                                                                                                                                                                           Hypothetical NON_TER SEQUENCE 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOD_RES
MOD_RES
SEQUENCE
                                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-NOV-1995 (Rel. 32, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
01-NOV-1995 (Rel. 32, Last annotation update)
HYPOTHETICAL PROTEIN IN PEPT 5'REGION (ORF2)
                                                                                                                                                                                                                                                                                                                                             Mierau I., Haandrikman A.J., Vel.
Konings W.N., Venema G., Kok J.;
"Tripeptidase gene (pepT) of Lea
and nucleotide sequencing of pep
                                                                                                                                                                                                                                 or send
                                                                                                                                                                                                                                                                                                                       J. Bacteriol. 176:2854-2861(1994).
                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE-94245610;
                                                                                                                                                                                                                                                                                                                                                                                                                                   Lactococcus lactis (subsp.
Bacteria; Firmicutes; Baci
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PFAM;
                                                                                                                                                                                                            EMBL; L27596; AAA20625.1;
                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hormone;
                                                                                                                                                                                                                                                                                                                                                                                                                        Lactococcus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ω
                                                                            ш
                                                                                                 N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  YSLEWKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       YTAECKP
                                                                            TTAIEPFISLGD
                                                                                                 TAECKPOVTRGD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LACIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PF00446; GnRH; 1.
TE; PS00473; GNRH; 1.
                                                                                                                                                                                                                                  an
                                                                                                                       Similarity 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Amidation; Hypothalamus
                                                                                                                                                                                                                                 requires a license agreement (S an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                 mutant
                                                                                                                                                                            13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10 AA;
  (Rel.
                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                  protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                  N.A.
                                                                                                                                                                            ΑΑ;
                      STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STANDARD;
                                                                                                 13
                                                                                                                                                                                                                                                                                                                                                                                       PubMed-8188586;
  15,
                                                                            12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10
1244 MW;
                                                                                                                                                                              1392
                                                                                                                                 26.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26.5%;
57.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                   ubsp. cremoris) (Streptococcus cremoris).
Bacillus/Clostridium group; Streptococcaceae;
  Created)
                                                                                                                                                                              MW;
                                                                                                                        Ÿ
                                                                                                                                  Score
Pred.
                                                                                                                                                                                                                                                                                                                                             Lactococcus lactis: molecular cloning pepT and construction of a chromosomal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 22; DB 1; Louis Pred. No. 3.7e+02; L; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AMIDATION.
1E4B36237B1735AB CRC64;
                                                                                                                                                                            3671D53271B459D7
                                                                                                                                                                                                                                                                                                                                                                             Velterop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PYRROLIDONE CARBOXYLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NO ;
                                                                                                                                   NO ;
                                                                                                                                                                                                                                                                                                                                                                             °;
                                                                                                                                                                                                                                              (See http://www.isb-sib.ch/announce/
                        15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ű
                                                                                                                    18e+02;
5;
                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ą
                                                                                                                                                                                                                                                                                                                                                                              Tan
                                                                                                                                                                                                                                                                                                                                                                                                                                                        (FRAGMENT)
                                                                                                                                                                                                                                                                                                                                                                              ъ
                                                                                                                                                                              CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LUTEINIZING
                                                                                                                                             Length 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 10;
                                                                                                                                                                                                                                                                                                                                                                             .S.T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACID
                                                                                                                                                                                                                                                                                                                                                                              Leenhouts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                        0
```

Ş

Query Match Best Local S Matches 4

4; Similarity

Conservative

Indels

0

0

66

```
SO THE REPORT OF THE REPO
                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-AUG-1990 (
15-JUL-1999 (
UREASE ALPHA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE.
STRAIN-63;
                                                                                                                                                                                                                                                                                                                                                        COMTE
                                                                                                                                                                                                                                                                                                 01-NOV-1995 (Rel.
01-NOV-1995 (Rel.
01-FEB-1996 (Rel.
                                                    Oxidoreductase; Flavoprotein; NON_TER 11 11 11 SEQUENCE 11 AA; 1213 MW;
                                                                                                                                                       quinoline and 3-methylquinoline degradation.";
Eur. J. Blochem. 232:536-544(1995).
-I- FUNCTION: CONVERTS (3-METHYL-)-QUINOLINE TO
                                                                                                                                                                                       "Quinoline 2-oxidoreductase and 2-oxc-1,2-dihydroquinoline dioxygenase from Comamonas testostercni 63. The first two e
                                                                                                                                                                                                             MEDLINE=96035889; PubMed=7556204: Schach S., Tshisuaka B., Fetzner S.,
                                                                                                                                                                                                                                                                                         QUINOLINE
                                                                                                                                                                                                                                                                                                                                    P80464;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Morganella.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Morganella morganii (Proteus mo:
Bacteria; Proteobacteria; gamma
                                                                                                                         -
                                                                                                                                    <u>:</u>
                                                                                                                                                                                                                                                                   Bactería;
                                                                                                                                                                                                                                                                                                                                              Q2OA_COMTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE-90254298; PubMed-2345135;
                                                                          (3 METRYL ) JULINUM SUBUNIT: HETEROHEXAMER OF TWO A TWO GAMMA CHAINS (PROBABLE).
TWO GAMMA CHAINS (PROBABLE)
                                                                                                                      COFACTOR: FAD AND MOLYBDENUM
PATHWAY: FIRST STEP IN THE D
                                                                                                                                                                                                                                                                                                                                                                     G
                                                                                                                                                                                                                                                                                                                                                                                                     PQISRQEYGGLF
                                                                                                                                                                                                                                                                                                                                                                                                                         POVTR---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A35389; A35389.
                                                                                                                                             2-DIHYDROQUINOLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                similarity
5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (FRAGMENT)
                                                                                                                                                                                                                                                                  95 (Rel. 32, Last sequence update).
96 (Rel. 33, Last annotation update).
2-oxiDOREDUCTASE, ALPHA CHAIN (EC 1.-.-) (FRAGMENT).
testosteroni (Pseudomonas testosteroni).
Proteobacteria; beta subdivision; Comamonadaceae; Comamonas.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (Rel. 15, Last sequence update)
(Rel. 38, Last annotation update)
a SUBUNIT (EC 3.5.1.5) (UREA AMIDOHYDROLASE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                          -GDVF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA;
                                                                                                                                                                                                                                                                                                                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                     12
                                                                                                                                                                                                                                                                                                                                                                                                                         15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1650
                                                                                                                                                                                                                                                                                                                                                                                                                                                          25.9%;
                                                                                                                                                                                                                                                                                                                         Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WW;
Score 21; DB Pred. No. 6.2e
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                Ψ
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 21.5;
Pred. No. 6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                morganii).
mma subdivision;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      09E27AA54241687B
                                                        869094322B1DC2CA
                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                         DEGRADATION OF QUINOLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                    ALPHA
                                                                             Molybdenum
                                                                                                                                                                                                              Lingens F.;
                                                                                                                                                                                                                                                                                                                                               H
            DB 1;
6.2e+02
                                                                                                    CHAINS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                           .9e+02;
                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                h M.J., Mobley H.L.T.; characterization, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Enterobacteriaceae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CRC64;
                                                        CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 NH(3).
                        Length
                                                                                                    OMI
                                                                                                                                                        (3-METHYL-)2-OXO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                    BETA CHAINS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (UREASE 63
                                                                                                                                                                                         enzymes
                                                                                                                                                                                                     5,6-
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                     AND
                                                                                                                                                                                         in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                  μ,
```

밁

AELKPR

11

```
UR2_GILMI
ID UR2_G
AC POILLA
AC POILLA
DT : 21-JU
DT 01-01
OC G
C GCLL:
OC ACCLI
RN [1]
RN [1]
RN SEQU
RX MEDL
RA Pear
RA Nish
                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                           밁
                                                              URZ_GILMI STANDARD; PRT; 12 AA.

P01147;

P01147;

P1147;

P121-JUL-1986 (Rel. 01, Created)

P121-JUL-1986 (Rel. 01, Last sequence update)

P1 01-OCT-2000 (Rel. 40, Last annotation update)

P1 01-OCT-2000 (Rel. 40, Last annotation update)

P1 01-OCT-2000 (Rel. 40, Last annotation update)

P2 01-UROTENSIN II (U-II) (UII)

S Gillichthys mirabilis (Long-jawed mudsucker).

C Eukaryota; Metazoa; Chordata; Cranlata; Vertebr

C Actinopterygii; Neopterygii; Teleostel; Eutelec

C Acanthomorpha; Acanthopterygii; Percomorpha; Pe
                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 4
MEDu...
Pearson D., Si
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P19897;
01-FEB-1991
01-FEB-1991
15-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This SWI
between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM W.A.
MEDLINE-90128268; PubMed-2515115;
Matsumoto K., Takano H., Kim C.I., Hirokawa H.;
"Primary structure of bacteriophage M2 DNA polymerase:
"Primary structure of bacteriophage M2 DNA polymerases and DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the El the European Bioinformatics Institute. There are no resti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            segments within protein-priming
of Escherichia coli.";
Gene 84:247-255(1989).
  MEDLINE-81054904; PubMed-6107911;
Pearson D., Shively J.E., Clark B
Nishioka R., Bern H.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                         NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Covalent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Early
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      or send an
                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bacteriophage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TERM_BPM2
                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Viruses;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OR.
                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                                                                                                                                                                     1
                                                                                                                                                                                                                                                                                             σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FUNCTION: DNA TERMINAL PROTEIN IS LINKED TO THE 5' ENDS OF BOTH STRANDS OF THE GENOME THROUGH A PHOSPHODLESTER BCND BETWEEN THE BETA-HUDROXYL GROUP OF A SERINE RESIDUE AND THE 5'-PHOSPHATE OF THE TERMINAL DEOXYADENYLATE. THIS PROTEIN IS ESSENTIAL FOR DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TERMINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OF THE TERMINAL DEOXYADENYLATE. THIS PROTEIN IS ESSENTIAL FOR REPLICATION AND IS INVOLVED IN THE PRIMING OF DNA ELONGATION.
                                                                                                                                                                                                                                                                                                                      RGDV
                                                                                                                                                                                                                                                                                           RGDV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      requires a license agreement
an email to license@isb-sib.ch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein-DNA
                                                                                                                                                                                                                                                                                                                                                                                                                         15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (Rel. 17, Created)
(Rel. 17, Last sequence update)
(Rel. 37, Last annotation update)
L PROTEIN (PROTEIN GP3) (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PQ0017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3
                                                                                                                                                                                                                                                                                                                                                                                                                         ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAA32367.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            viruses,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                         1797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                replication;
                                                                                                                                                                                                                                                                                                                                                               25.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tinkage.
                                                                                                                                                                                                                                                                                                                                                                                                                         WW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            no
                   Clark B.R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RNA stage;
                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                               Score 21;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                       CELL ATTACHMENT SITE (POTENTIAL).
D3CBAFF8759DEA06 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                     raniata; Vertebrata; Euteleostomi;
leostei; Euteleostei; Neoteleostei;
Percomorpha; Perciformes; Gobioidei;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA
                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               priming;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tailed phages;
                   Geschwind
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15
                                                                                                                                                                                                                                                                                                                                                               DB 1;
8.5e+(
                                                                                                                                                                                                                                                                                                                                                                .5e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                as its content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Usage
                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                             Length 15;
                 I.I.,
                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    by and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Podoviridae.
                 Barkley
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            restrictions on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      conserved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       polymerase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a collaboration -
MBL outstation -
                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            outstation
                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                 0;
```

```
RESULT 8
UR2_PGAN
ID POLY
ID POLY
ID O1-NO
DT 01-NO
DT 01-NO
DT 01-NO
DT 01-NO
DT 01-NO
DT 01-NO
DT 10-NO
DT 10
RESULT
UN02_PI
ID UI
AC PI
DT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 3
UN02_PINPS
P81667;
15-JUL-1999
15-JUL-1999
                                                                              _PINPS
                                                                                                                                                                                                                                                                                                                              PROSITE;
Hormone.
DISULFID
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hormone.
DISULFID
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        UR2_POLSP
P81022;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-NOV-1997 (Rel. 35,
01-NOV-1997 (Rel. 35,
01-OCT-2000 (Rel. 40,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         neurosecretory system of fishes.";
proc,, Natl. Acad. Sci. U.S.A. 77:5021-5
proc, Trunctro: UROTENSIN IS FOUND IN THE
SYSTEM. IT HAS A SUGGESTED ROLE IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A
TISSUE-SPINAL COR
MEDLINE-96051494;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Polyodon spathula (North American
Eukaryota; Metazoa; Chordata; Cran
Actinopterygii; Chondrostei; Acipe
                                                                                                                                                                                                                                                                                                                                                                                                           PFAM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           spathula).";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              UROTENSIN II (U-II) (UII)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDINE-96051494; PubMed-8536944;
Waugh D., Youson J., Mims S.D., Sower
Wordensin II from the river lamprey (
Lamprey (Petromyzon marinus), and the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     olyodon.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PFAM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Urotensin
                                                                                                                                                                                                                                                                                                                                                                                                                                 NTERPRO;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INTERPRO;
                                                                                                                                                        ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N
                                                                                                                                                                                            2 TAEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . Comp. Endocrinol. 99:323-332(1995).
FUNCTION: HAS A SUGGESTED ROLE IN OSMOREGULATION AND CORTICOTROPIN-RELEASING FACTOR. PROBABLY INVOLVED IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORTICOTROPIN-RELEASING FACTOR SIMILARITY: BELONGS TO THE URO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                æ
                                                                                                                                                      TSEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TAEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MUSCLE STIMULATION.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A01409; UOGM2
                                                                                                                                                                                                                                                                                                                                                                                       PF02083; Uro
TE; PS00984;
                                                                                                                                                                                                                                  Similarity 75.0
3; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity 75. 3; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           D2083; Urotensin_II; 1.
PS00984; UROTENSIN_II;
                                                                                                                                                          σ
                                                                                                                                                                                            s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                             IPR001483;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IPR001483; -.
                                                                                                                                                                                                                                                                                                                                12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     II: a somatostatin-like peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORD;
                                                                                                                                                                                                                                                                                                                              AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6
AA;
                                                                                                                                                                                                                                                                                                                                                                                                           Urotensin_II;
                                                            STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 BELCNGS
                                                                                                                                                                                                                                                                                                                                                                                       UROTENSIN_II;
                                                                                                                                                                                                                                                                                                                              11
1410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11
1354
                                                                                                                                                                                                                                                    24.1%;
75.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24.1%;
75.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                 OI
                                                                                                                                                                                                                                                                                                                                WW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ¥.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       THE UROTENSIN 2 FAMILY
                                                                                                                                                                                                                                Score 20; DB 1;
Pred. No. 1e+03;
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ή.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   rican paddlefish).
; Craniata; Vertebrata; Euteleost Acipenseriformes; Polyodontidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score
Pred.
                                                                                                                                                                                                                                                                                                                              BY SIMILARITY.
7551E9DBB879CEBB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  958BF8982679CEBA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       77:5021-5024(1980).
UND IN THE TELEOST CAUDAL NEUROSECRETORY
D ROLE IN OSMOREGULATION AND AS A
                                                                                                                                                                                                                                                                                                                                                                                                                                                 UROTENSIN 2 FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20;
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             r S., Conlon J.M.;
(Lampetra fluviatilis),
e paddlefish (Polyodon
                                                            13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 1;
1e+03;
                                                            ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       the
                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CRC64
                                                                                                                                                                                                                                                                      Length 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 12;
                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       caudal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Euteleostomi;
                                                                                                                                                                                                                                  0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the
                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sea
                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

(Rel.

38, 38,

Created) Last sequ

sequence

update)

```
RESULT
RS11_SA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SO SET TO COLOR REPORT OF THE COLOR REPORT OF 
                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 4
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUS-NEEDLE;
MEDLINE-99274088; PubMed=10344291;
Costa P., Pionneau C., Bauw G., Dubos C.,
Frigerio J.-M., Plomion C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15-JUL-1999 (Rel. 38, Last anno UNKNOWN PROTEIN FROM 2D-PAGE OF Pinus pinaster (Maritime pine). Eukaryota; Viridiplantae; Embry
                                                                                                                                                                                                                                                        the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed entities requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RS11_SALTY
054296;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NON_CONS
                                                                                                                                                                                                                                                                                                                                                                                                                              Bjorkman J., Hughes D., Andersson D.;
Submitted (JAN-1998) to the EMBL/GenBank/DDBJ databases.
-i- FUNCTION: S11 PLAYS AN ESSENTIAL ROLE FOR THE SELECTION OF TH.
CORRECT TRNA IN PROTEIN BIOSYNTHESIS. IT IS LOCATED ON THE LA.
LOBE OF THE SMALL SUBUNIT (BY SIMILARITY).
-i- SIMILARITY: BELONGS TO THE S11P FAMILY OF RIBOSOMAL PROTEINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Separation and characterization of proteins.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Coniferopsida; Coniferales; Pinaceae;
                                                                                                                                                                                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Salmonella
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RPSK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-MAY-2000
01-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NON_TER
                                                                                                                                                   PROSITE;
                                                                                                                                                                                                                    EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN-LT2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Salmonella.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bacteria;
                                                                                                           NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 lectrophoresis 20:1098-1108(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RIBOSOMAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MISCELLANEOUS: OF PROTEIN IS: 5.4,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INDUCTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TRDNVF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TRGDVF 15
                                                                                                                                                                                                                  AJ223236; CAA11202.1;
                                                                                                                                                   PS00054; RIBOSOMAL_S11;
                                                                                                                                                                                              SG10702;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a typhimurium.
Proteobacteria;
                                                                                                                               protein.
                                                                                                                                                                          IPR001971;
                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (Rel. 39, 0) (Rel. 39, 0) (Rel. 40, 1) (Rel. 40, 1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                       ĄΑ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BY WATER-STRESS.
DUS: ON THE 2D-GI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STANDARD;
                                                                                       1139
                                                                                                                                                                                              RPSK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            24.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ITS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Last annotation update) 2D-PAGE OF NEEDLES (N55)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Last sequence update)
Last annotation update)
S11 (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Created)
                                                                                       Œ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2D-GEL THE DETERMINED MW IS: 43 KDA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Embryophyta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gamma
                                                                                       7A5B140333277774 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 20; DB 1;
Pred. No. 1.1e+03;
1; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 966B5A43EF94B411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        subdivision;
                                                                                                                                                      PARTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             needle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             : Tracheophyta; Spermatophyta; Pinus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                  There
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bahrman N., Kremer
                                                                                                                                                                                                                                                                                                                            as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and
                                                                                                                                                                                                                                                                                 http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Enterobacteriaceae;
                                                                                                                                                                                                                                                                                                       Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (FRAGMENTS).
                                                                                                                                                                                                                                                                                                                         its content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         xylem
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ΡI
                                                                                                                                                                                                                                                                                                                                                  ņ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          မ္က
                                                                                                                                                                                                                                                                                                       Ϋ́
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           maritime
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SIHT
                                                                                                                                                                                                                                                                                                       and
                                                                                                                                                                                                                                                                                                                                                                    EMBL
                                                                                                                                                                                                                                                                                                                                                                        a collaboration -
                                                                                                                                                                                                                                                                                                                              ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             UNKNOWN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             pine
                                                                                                                                                                                                                                                                                                                                                                      outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LARGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
```

.98;

Score Pred.

No.

DB 1; 8.9e+04;

```
δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local s
Matches 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LHYDAT
PEDI_HYDAT
P80578;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-0CT-1996
01-0CT-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   P42994;
01-NOV-1995
01-NOV-1995
01-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Morphogen.
SEQUENCE
                                                                                                                                                                                                                                                                                     MEDLINE=66123415; PubMod=5880565;
Acher R., Chauvet J., Chauvet M.-T., Crepy
"Phylogeny of neurophyophyseal peptides: is
glumitocin (Ser 4-Gln 8-ocytocin) present i
                                                                                                                                                                                                                                                                                                                                                                                                    Raja clavata (Thornback ray).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Chondrichthyes;
Elasmobranchii; Squalea; Hypnosqualea; Pristiorajea; Batoidea;
Rajiformes; Rajidae; Raja.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      peptides from Hydra vulgaris.";
Development 122:1941-1948(1996)
-!- FUNCTION: MORPHOGENETICALLY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hydra attenuata (Hydra)
Eukaryota; Metazoa; Cni
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GLUMITOCIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hydridae: Hydra
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE-96232307;
                                                                             SEQUENCE
                                                                                               MOD_RES
                                                                                                                 DISULFID
                                                                                                                                    Hormone;
                                                                                                                                                    PROSITE;
                                                                                                                                                                                                                                                 the ray (Raia clavata).
Biochim. Biophys. Acta
                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'Isolation and characterization
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                offmeister S.A.H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                            NTERPRO;
                                                                                                                                                                                                                !- SIMILARITY: BELONGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4 ECKPQV 9
| :|:|
2 ELRPEV 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEVELOPMENT.
                                                                                                                                                                                                                                  FUNCTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RAJCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CKPOVTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CRPPKKR
                                                                                                                                                                          PF00220;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ω
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
3; Conser
                                                                                                                                                                                                                                Biophys. Acta 107:393-396(1965). TION: ANTIDIURETIC HORMONE.
                                                                                                                                    Amidation.
                                                                                                                                                      PS00264; NEUROHYPOPHYS_HORM;
                                                                                                                                                                                            IFR000981;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13
                                                                             ဖ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (Rel.
(Rel.
(Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (Rel.
(Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                             AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ₽₽.;
                                                                                                                                                                      hormone4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    . 34, Created)
. 34, Last sequence and the sequence and t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PubMed-8674432;
                                                                             984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1512 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           dra) (Hydra vulgaris).
Cnidaria; Hydrozoa; Hydroida;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22.9%;
 21.1%;
                                                                                                   96
                                                                             Μ¥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Last sequence update)
Last annotation update)
                                                                                                                                                                                                                TO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sequence up
                                                                                                                                                                                                        THE
                                                                           AMIDATION.
17E9C76EB455B04B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 19; DB Pred. No. 1.7e 2; Mismatches
 Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6F5266E3F37632CB CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                VASOPRESSIN/OXYTOCIN FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ō,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACTIVE PEPTIDE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                       present in
 17.5;
Nc. 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                two new
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      update)
on update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.7e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BB
   DB 1;
.9e+04;
                                                                                                                                                                                                                                                                                         isolation of a new hormone, in a cartilaginous fish,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ŗ
                                                                                                                                                                                                                                                                                                                               D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                morphogenetically active
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ψ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACTIVE
                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Anthomedusae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
```

```
SO DE COCCOERTE RANGE RANGE COCCOERTE RANGE RANG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
MEDLINE-9035157; PubMed-238001.,

Cintra A.C.O., Vieira C.A., Giglio J.R.;

Cintra A.C.O., Vieira C.A., Giglio J.R.;

Primary structure and biological activity of bradykinin poter

"primary structure and biological activity of bradykinin poter

"peptides from Bothrops insularis snake venom.";

J. Protein Chem. 9:221-227(1990).

-i- FUNCTION: THIS PEPTIDE BOTH INHIBITS THE ACTIVITY OF THE

ANGIOTENSIN-CONVERTING ENEXYME AND ENHANCES THE ACTION OF

ARADYKININ BY INHIBITING THE KINASES THAT INACTIVATE IT.

RRADYKININ BY INHIBITING THE KINASES THAT INACTIVATE IT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bothrops jararaca (Jararaca).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Lepidosauria; Squamata; Scleroglossa; Serpentes; Colubroidea;
Viperidae; Crotalinae; Bothrops.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21-JUL-1986 (Rel. 01, Created)
01-FEB-1994 (Rel. 28, Last sequence update)
01-FEB-1994 (Rel. 28, Last annotation update)
BRADYKININ-POTENTIATING PEPTIDE 10B (ANGIOTENSIN-CONVERTING ENZYME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BPP3_BOTIN
P30423;
01-APR-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=72118526; PubMed=4334
Ondetti M.A., Williams N.J.,
KOCY O.;
                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                         Bothrops insularis (Island jararaca) (Queimada jararaca).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Lepidosauria; Squamata; Scleroglossa; Serpentes; Colubroidea;
Viperidae; Crotalinae; Bothrops
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hypotensive agent; Venom.
MOD_RES 1 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE.
TISSUE=VENOM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-APR-1993 (Rel.
01-FEB-1994 (Rel.
01-FEB-1994 (Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BPP2_BOTJA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ENZYME INHIBITOR)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pararaca. Isolation, elucidation of structure, and synthesis.

Biochemistry 10:4033-4039(1971).

FUNCTION: THIS PEPTIDE BOTH INHIBITS THE ACTIVITY OF THE ANGIOTENSIN-CONVERTING ENZIME AND ENHANCES THE ACTION OF BRADYKININ BY INHIBITING THE KINASES THAT INACTIVATE IT.

TO ACTS AS AN INDIRECT HYPOTENSIVE AGENT.

JIR, A01255; XAV16B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           )1-APR-1993 (Rel. 25, Created)
)1-FEB-1994 (Rel. 28, Last sequence update)
)1-FEB-1994 (Rel. 28, Last annotation update)
RADYKININ-POTENTIATING PEPTIDE S4,3,2 (10C) (ANGIOTENSIN-CONVERTING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Angiotensin-converting enzyme inhibitors from the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NHIBITOR V-6-II)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
nes 2; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             YTAECKPQ
| : | ||
YISNC-PQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KPQV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PubMed=4334402;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1232 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          . 5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ?
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 17;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PYRROLIDONE CARBOXYLIC ACID 30C53546C7741773 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sabo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             E.F., Pluscec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .9e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ጅ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ď.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              venom of Bothrops
synthesis.";
                                                                                                                                                                                               potentiating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ب
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ۲.,
```

Search completed: Job time: 110 sec

March

6

```
밁
                                              Š
                                                                                                                                                                                                                                        SOURCE CONTRACTOR OF THE SOURCE CONTRACTOR OF 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 15
BPP4_BOTIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Simi
Matches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFT
                                                                                                  Query Match
Best Local S
Matches 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PIR; C37196; C37196.
Hypotensive agent; V
MOD_RES 1
SEQUENCE 11 AA; 1
                                                                                                                                                                                                                                   Hypotensive agent; Venom. MOD_RES 1 1 1 1 SEQUENCE 11 AA; 1143 MV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BPP4_BO
P30424;
                                                                                                                                                                                                                                                                                                                  PIR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-90351557;
Cintra A.C.O., Vie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bothrops insularis (Island jararaca) (0
Eukaryota; Metazoa; Chordata; Craniata;
Lepidosauria; Squamata; Scleroglossa; S
Viperidae; Crotalinae; Bothrops
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-APR-1993 (Rel. 25, Created)
01-FEB-1994 (Rel. 28, Last sequence update)
01-FEB-1994 (Rel. 28, Last annotation update)
BRADYKININ-POTENTIATING PEPTIDE S4,1,2 (ANGIOTENSIN-CONVERTING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ENZYME INHIBITOR)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WEDLINE-9035157; PubMed-2386615;
Cintra A.C.O., Vieira C.A., Giglio J.R.;
"Primary structure and biological activity of bradykinin peptides from Bothrops insularis snake venom.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FISSUE-VENOM;
                                                                                                                                                                                                                                                                                                                FORTER Chem. 9:221-227(1990).

1- FUNCTION: THIS PEPTIDE BOTH INHIBITS THE ACTIVITY OF TAMBIOTINNSIN-CONVERTING ENTRY AND ENHANCES THE ACTION BRADIXININ 9Y INHIBITING THE KINASES THAT INACTIVATE IT ACTS AS AN INDIRECT HYPOTENSIVE AGENT.

IR; D37196; D37196.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6 RPQI 9
σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6 KPQV 9
                                                 6 KPQV 9
  RPOI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BOTIN
                                                                                                  l Similarity
2; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2; Conserv
  9
                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C37196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1199 MW;
                                                                                                                                                                                                                                      1143 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Venom.
                                                                                                                           50.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    50
                                                                                                                              . 5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    . 09;
                                                                                                  Score 17; DB
Pred. No. 3.2e
2; Mismatches
                                                                                                     2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 17; DB Pred. No. 3.2e 2; Mismatches
                                                                                                                                                                                                                                      PYRROLIDONE CARBOXYLIC ACID 20BBBF13C7741777 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PYRROLIDONE CARBOXYLIC 20B25813C7741777 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (Queimada jararaca).
.a; Vertebrata; Euteleost
. Serpentes; Colubroidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11
                                                                                                                              DB 1;
3.2e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 1;
.2e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                        0
                                                                                                                                                   Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACID
                                                                                                                                                                                                                                                                                                                                                                      THE
N OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       potentiating
                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
```

THIS PAGE BLANK (USPTO)

١,

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Post-processing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Minimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Total number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Searched
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SPTREMBL_15:*

SP_BERBL_15:*

SP_Barchea:*
Sp_bacter1/
Ssp_fung1:*
4: sp_human:
5: sp_luver
6: sp_mamn/
7: sp_mhc
8: sp_orc
9: sp_ph
10: sp_
11: sp.
12: sr
13: s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No. is the number of results predicted by chance to have score greater than or equal to the score of the result being predicted by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BB
                                                                                                                                                                                                                                                                                                                                                                                                                                        Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        length:
                                                                                                                                                                                                                                                                                                                                                                                                                                      Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Minimum Match 0%
Maximum Match 100%
Listing first 45 s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BLOSUM62
Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-081-522-8
83
  March
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  374700 seqs, 117207915 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             YTAECKPQVTRGDVF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sp_archea: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sp_bacteria:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sp_organelle:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sp_invertebrate:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sp_rodent:*
sp_virus:*
sp_vertebrate:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    p_mammal:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sp_unclassified:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sp_plant:*
                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           σ,
  2001, 09:48:28;
                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gapext 0.5
038415
0691142
0901141
048933
048933
048933
048933
048933
048933
048933
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
04893
                                                                                                                                                                                                                                                                                                                                                                                                                                        Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Search time 19.79 Seconds (without alignments) 88.839 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2289
                                                          P74844 salmoneila
Q9y4z9 homo sapien
P82438 nicotiana t
P82322 pisum sativ
                      Q9ucy1 homo sapien
Q97092 human immu
                                                                                                                                                                                             077871 oreochromis
077872 oreochromis
                                                                                                                                                                                                                                                                                                                                              Q38415 bacteriopha
069142 streptococc
Q9n1x1 equus cabal
                                                                                                                                                                       077873 creochromis
                                                                                                                                                                                                                                                                                 Q9x635 escherichia
                                                                                                                                                                                                                                                                                                     Q48933 mycobacteri
Q9x637 klebsiella
                                                                                                                                                                                                                                                                                                                                                                                                                                    Description
                                                                                                                                                                                                                                        Q9qv00 rattus sp. P82445 nicotiana t
                                                                                                                                                  homo sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                printed,
immun
```

	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20
	17	17	17	17	17	. 17	17	17	17	17	17	18	18	18	18	18	18	18	18	18.5	19	19	19	19	19	19
	•	•		•	•		20.5	•	•	٠	•		21.7	21.7	21.7	21.7	21.7	21.7	21.7	22.3	•	22.9	•	•	22.9	22.9
•	13	13	13	13	13	13	11	11	Q	9	œ	15	15	15	12	12	12	10	9	15	15	15	15	14	14	13
	12	12	12	12	4	N	13	7	4	4	N	7	4	N	11	10	4	N	2	σı	13	œ	Çī	12	ω	œ
	Q81761	Q81781	Q81770	Q81769	Q15537	Q9X9D7	Q90735	078119	Q99887	Q15386	Q9S6D5	C19468	Q9UCC7	Q9R599	Q9QZY4	Q41856	Q9UMZ8	Q9ZIB1	Q9R735	Q9TXC8	Q9PRZ9	Q9T355	Q9TWD5	Q89818	Q9MRF6	Q9T2U1
		Q81781 hepatitis c	Q81770 hepatitis c	Q81769 hepatitis c	Q15537 homo sapien	Q9k9d7 bacillus ha	Q90735 gallus gall	078119 oreochromis	Q99887 homo sapien	Q16386 homo sapien	Q9s6d5 escherichia	O19468 mus musculu	Q9ucc7 homo sapien	Q9r599 micrococcus	mus	Q41856 zea mays (m	Q9umz8 homo sapien	Q9zibl clostridium		Q9txc8 locusta mig	Q9prz9 micropogoni	Q9t355 synagrops b	Q9twd5 locusta mig	œ	Q9mrf6 hordeum mur	Q9t2ul bos taurus

ALIGNMENTS

```
RESULT
069142
ID 06
AC 05
                                                                                                                                                                                                                                                                                                                                                                                                                 REPART OF SELECTION OF SELECTIO
                                                                                                                                                                   밁
                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                    Query Match
Best Local
  059142
059142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q38415
Q38415;
Q1-NOV-1996
                                                                                                                                                                                                                                                                                                                                                                                                                 Nucleic Acids Res. 20:3085-3090(1992).
EMBL; M35139; AAA32437.1; -
NON_TER 1 11
SEQUENCE 11 AA; 1315 MW; 33A55C6D1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
MEDLINE=90335963; PubMed=1696181;
Citron M., Schuster H.;
The c4 repressors of bacteriophages
Cell 62:591-598(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ANT1 PROTEIN (FRAGMENT).
Bacteriophage P7.
Viruses; dsDNA viruses, no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
MEDLINE=92319637; PubMed=1620606;
Citron M., Schuster H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=10682;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The c4 repressor of bacteriophage P1
                                                                                                                                                                   ω
                                                                                                                                                                                                                      6 KPQVTRGDV 14
                                                                                   N
                                                                                                                                                                   KPLVTRNDI
                                                                                                                                                                                                                                                                             Similarity 6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (TrEMBLrel. 01, Created)
(TrEMBLrel. 01, Last sequence up
(TrEMBLrel. 08, Last annotation
                                                                                                                                                                                                                                                                             Conservative
                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                   11
                                                                                                                                                                                                                                                                                                    39.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RNA stage;
                                                                                                                                                                                                                                                                             <u>--</u>
                                                                                                                                                                                                                                                                                                       Score 33; DB
Pred. No. 15;
                                                                                                                                                                                                                                                                                                                                                                                                                    39A55C6D11B2C737
                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P1 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tailed phages; Myoviridae.
                            15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ŗ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11
                               ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         update)
on update)
                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        processed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P7
                                                                                                                                                                                                                                                                                                                                                                                                                    CRC64;
                                                                                                                                                                                                                                                                             ?:
                                                                                                                                                                                                                                                                                                                                 Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           are
                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           antisense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        base
                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          antisense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RNAS.";
                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                             0;
```

```
RESULT
OPINIAL
ID
OPINIAL
OPINIAL
OPINIAL
OPINIAL
OPINIAL
OPINIA

RESULT
Q48933
ID Q4
AC CAC
AC A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                 몽
                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 5
                                                     Q48933 PRELIMINARY; PQ48933; P77701; Q48933; P77701; Q48932; O1-NOV-1996 (TEMBLrel. O1, Las O1-NOV-1998 (TEMBLrel. O8, Las ALKYL HYDROPEROXIDE REDUCTASE C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-AUG-1998
01-AUG-1998
01-AUG-1998
PROTEIN SIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q9N1X1
Q9N1X1;
01-OCT-2000
01-OCT-2000
01-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NON_TER
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SIC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Streptococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Caetano A.R., Shiue Y.L., Bowling A.T., Murray J.D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Berge A., Rasmussen M., Bjorck L.;
Infect. Immun. 0:0-0(1998).
EMBL; AF064540; AAC38769.1; -.
NON TER 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bacteria; Firmicutes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Streptococcus
  Mycobacterium bovis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
MEDLINE-20082971; PubMed-10613847;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=9796;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Equus caballus (Horse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADH3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN-AP1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=1314;
                                AHPC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "A comparative gene map of the horse Genome Res. 9:1239-1249(1999). EMBL; AF134056; AAF31299.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          u
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  w
                                                                                                                                                                                                                                                                                                                                                 TAQVEPWVT
                                                                                                                                                                                                                                                                                                                                                                                                          TAECKPQVT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CKPSVT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CKPQVT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -2000 (TrEMBLrel.
-2000 (TrEMBLrel.
-2000 (TrEMBLrel.
-2000 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity | 5; Conservat
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity 55. 5; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (TrEMBLrel. (TrEMBLrel. (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (FRAGMENT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ΑA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          pyogenes.
                                                                                                                                                                                                                                                                                                                                                 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1552 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chordata; Craniata; Vertebrata; Perissodactyla; Equidae; Equus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             36.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             55
55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bacillus/Clostridium group; Streptococcaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           . 15, Created)
. 15, Last sec
. 15, Last and
! (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                97,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          . 68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Lyons
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; Score 30; DB; Pred. No. 70; 0; Mismatches
                                                                             Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 25; DB Pred. No. 3.7e 2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ņ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Created)
                                                                                                                                           Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C4EA25676B02D6DD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              87655FEF847401FF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     L.A.,
                                                           (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sequence update) annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (Equus
                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB b;
3.7e+02;
2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        O'Brien
                                                                                                                                                                                                   11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                   A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   caballus).";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S.J., Laughlin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     T.F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

```
THE REPORT OF THE REST OF THE 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              멅
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-NOV-1999
01-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bacteria; Firmicu:
Actinomycetales; (
NCBI_TaxID=1765; [1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; U57
EMBL; U57
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                           Liebert C.A., Wireman J., Smill 1., Jermen of g. "Phylogeny of mercury resistance (mer) operons of g. bacteria isolated from the fecal flora of primates. Appl. Environ. Microbiol. 63:1066-1076(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Klebsiella (
Bacteria; P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Zhang Y.,
Submitted
Submitted (FEB-1999) to the EMBL; AF131272; AAD37141.1; NON_TER 15 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Dhandayuthapani S., Zhang Y., Deretic V.; "Oxidative stress response and its role in sensitivity t mycobacteria: characterization and inducibility of ahpC in Mycobacterium smegmatis and lack of expression in M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN-ATCC35728,
                                                                                                                                                                           MEDLINE-98027386; PubMed-9361435; Wireman J., Liebert C.A., Smith T., Summers A.O.; Wireman J., Liebert C.A., Smith T., Summers A.O.; "Association of mercury resistance with antibiotic gram-negative fecal bacteria of primates."; Appl. Environ. Microbiol. 63:4494-4503(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FRO
STRAIN-509H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q9X637;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q9X637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   J. Bacteriol. 178:3641-3049
EMBL; U58031; AAB00320.1;
EMBL; U57979; AAA99830.1;
EMBL; U57978; AAA99829.1;
EMBL; U57762; AAB00317.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN-ATCC357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                           SEQUENCE FRO
                                                                                                                 SEQUENCE FRO
STRAIN=509H;
                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-97208220;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tuberculosis."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE-96256622;
                                                               '15-bp tandem
                                                                                                 Wireman J., Liebert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=571;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Klebsiella
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      տ
                                                           operon.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                POVTRGDVF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (FRAGMENT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PLLTIGEOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
5; Conserv
                                                                                                                                                                                                                                                                                             FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FROM N:A.
                                                                                                                                       FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Firmicutes; Actinobacteria; Actinobacteridae;
etales; Corynebacterineae; Mycobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Deretic V. (MAY-1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        e cxytoca.
Proteobacteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (TrEMBLrel.) (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                           repeats of
                                                                                                                                       N.A.
                                                                                                                                                                                                                                                                                             N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N:A.
                                                                                                                                                                                                                                                                                                                                                                                     Wireman J , Smith T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A
A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   178:3641-3649(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       V AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PubMed=8655566;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1231 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ς
                                                                           .A., Smith
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATCC35727;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12,
12,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gamma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. 6.2e
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Created)
Last sequence
Last annotation
                                         EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     455099E3A87041A7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                               ø
                                                                                                   .
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            subdivision; Enterobacteriaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sequence update) annotation update)
                                                                             sharp
                                                                                                 Summers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15
                                                                             mmers A.O.;
transition
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 2;
6.2e+02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ω
                                                                                                                                                                                                                                                                                                                                                                         of gram-negative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                               'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                     resistance
                                                                               gc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             to isoniazid
by peroxides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             aurum and
                                                                                 content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               peroxides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                     ĺ'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                 ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

proteins

Gaps

0

```
O THE PRESENT OF THE 
믕
                                                                                                                                                                                                                                                                                                             ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
Matches
                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 5
                                                   Q9QV00 PRELIMINARY;
Q90V00;
01-MAY-2000 (TIEMBLIE1. 13, CI
01-MAY-2000 (TIEMBLIE1. 13, La
01-MAY-2000 (TIEMBLIE1. 13, La
EOSINOPHIL CATIONIC PROTEIN (1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q9X635;
Q9X635;
01-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                          NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Wireman J., Liebert C.A., Smith T., Summers A.O.; "15-bp tandem repeats occur at a sharp transition mer operon.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE-98027386; PubMed-9361435; Wireman J., Liebert C.A., Smith T., Summers A.O.; Wireman J., Liebert C.A., Smith T., Summers A.O.; "Association of mercury resistance with antibiotic resistance gram-negative fecal bacteria of primates."; Appl. Environ. Microbiol. 63:4494-4503(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE-97208220; PubMed-9055422;
Liebert C.A., Wireman J., Smith T., Summers A.O.;
"Phylogeny of mercury resistance (mer) operons of gracteria isolated from the fecal flora of primates.
Appl. Environ. Microbiol. 63:1066-1076(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
  Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted (FEB-1999) to the EMBL; AF131271; AAD37139.1; NON_TER 15 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 App1.
                                          Rattus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN-390;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN-390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Escherichia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=562;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bacteria; Proteobacteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Escherichia coli.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MERT (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  σ
                                                                                                                                                                                                                                                                     EPQNGRGALF
                                                                                                                                                                                                                                                                                                             KPQVTRGDVF 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KPQVTRGDVF 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EPONGRGALF
                                                                                                                                                                                                                                                                                                                                                      Similarity
5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
5; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ) (TrEMBLrel.
) (TrEMBLrel.
) (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15
                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                          AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12
                                                                                                                                                                                                                                                                                                                                                                                                                                                          1492 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1492
  Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                         28.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     50
50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   . 98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gamma
                                                                                                                                                                                                                                                                                                                                                    Score
Pred.
2; Mis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Created)
Last sequence up
Last annotation
                                                                               Last sequence update)
Last annotation updat
                                                                                                                         Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 24; DB
Pred. No. 8.5e
2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2;
                                                                (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    65BFCFC9827A585D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          65BFCFC9827A585D CRC64;
                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
  Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         subdivision;
                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                           NO.
                                                                                                                                                                    15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15
                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 2; 1
8.5e+02;
                                                                                                                                                                                                                                                                                                                                               лв ∡,
J.5e+02;
З;
                                                                                                                                                                                                                                                                                                                                                                                               DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ⋧
                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           update)
                                                                                 update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Enterobacteriaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 15
                                                                                                                                                                                                                                                                                                                                                                                               Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             in gc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gram-negative
                                                                                       tu e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               content
                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          in
                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                        0
RESULT
P82445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SERTERN
                                                                                                                                                                                                                                                                                                                                                                                                                δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cell wall.
NON_TER
SEQUENCE
                                                     01-NOV-1998 (TrEMBLrel. 08, Created)
01-NOV-1998 (TrEMBLrel. 08, Last sequence update)
01-NOV-1998 (TrEMBLrel. 08, Last sequence update)
01-NOV-1998 (TrEMBLrel. 08, Last annotation update)
MHC CLASS II B LOCUS 1 (FRACKENT).
0reochromis niloticus (Nile tilapia) (Tilapia nilotica).
0reochromis niloticus (Nile tilapia) (Tilapia nilotica).
0reochromis niloticus (Nile tilapia) (Tilapia nilotica).
0reochromis (Lateleostei; Butcleostei; Neotleostei; Neotleostei, 
                                                                                                                                                                                                                                                 077871
077871;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    P82445:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE.
STRAIN-CV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nicotiana tabacum (Common tobacco).
Eukaryota; Viridiplantae; Embryophyta;
Magnoliophyta; eudicotyledons; core eud
Solanales; Solanaceae; Nicotiana.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-JUN-2000 (TrEMBLrel. 14, Careated)
01-JUN-2000 (TrEMBLrel. 14, Last sequence update)
01-JUN-2000 (TrEMBLrel. 14, Last annotation updat)
10 KDA CELL WALL PROTEIN (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-JUN-2000
01-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Watanabe M., Nittoh T., Suzuki T., Kitoh A., Mue S., Ohuchi K "Isolation and partial characterization of eosinophil granule in rats-eosinophil cationic protein and major basic protein. Int. Arch. Allergy Immunol. 108:11-18(1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE.
MEDLINE=95375557; PubMed=7647580;
    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Proteomic study c
tobacco culture.";
Planta 0:0-0(2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=10118;
[1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -!- TISSUE SPECIFICITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Blee K.A., Bo
Wojtaszek P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID-4097;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         :- SUBCELLULAR LOCATION: CELL
:- TISSUE SPECIFICITY: XYLEM.
                                                                                                                                                                                                                                                                                                                                                                             \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 YTAECK 5 .
                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                         VIRGDVF 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FTGHCK 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
3; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           . PETIT HAVANA;
, Bonham V.A., N
P., Bolwell G.F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of secondary cell wall
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1785 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25.3%;
71.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mitchell G.P., P.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               69D2C1E862D1B2A0 CRC64,
                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 22; DB
Pred. No. 2e+C
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 21;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2AF6D99C12EBD794 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ta; Tracheophyta; Spermatophyta;
eudicots; Asteridae; euasterids
                                                                                                                                                                                                                                                                       11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Robertson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BB
                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .7e+05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .
D
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Slabas A.R.,
                                                                                     Labroidei;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
```

H,

Gaps

```
RESULT
077873
ID 077
AC 07
AC 07
DT 01
DT 01
DT 01
DT 01
COC EC
CC AC
CC C1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
077872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SQ SQ SQ
                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
Matches 3
                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 3
                                                                       077873;
01-NOV-1998
01-NOV-1998
01-NOV-1998
                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
MEDLINE-98315113; PubMed-9649539;
MALAGA-Trillo E., McAndrew B., Vincek V.,
Sueltmann H., Figueroa F., Klein J.;
"Linkage relationships and haplotype polym
class II B loci.";
Genetics 149:1527-1547(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NON_TER
        01-NOV-1998 (TREMBLrel. 08, Created)
01-NOV-1998 (TREMBLrel. 08, Last sequence update)
01-NOV-1998 (TREMBLrel. 08, Last annotation update)
01-NOV-1998 (TREMBLrel. 08, Last annotation update)
MHC CLASS II B LOCUS 1 (FRAGMENT).
Oreochromis niloticus (Nile tilapia) (Tilapia nilotica).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi).
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Perciformes; Labroidei;
                                                                                                                                                                                                                                                                                                        NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MHC CLASS II B LOCUS 1 (FRAGMENT),
Oreochromis niloticus (Mile tilapia) (Tilapia nilotica).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
Actanichomorpha; Acanthopterygii; Percomorpha; Perciformes; Labroide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Malaga-Trillo E., McAndrew B., Vincek V., Zaleska-Sueltmann H., Figueroa F., Klein J.;
"Linkage relationships and haplotype polymorphism class II B loci.";
Genetics 149:1527-1547(1998).
EMBL; AF049980; AAC41319.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cichlidae; Oreochromis.
NCBI_TaxID=8128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          077872;
01-NOY-1998 (TIEMBLrel. 08, Created)
01-NOY-1998 (TIEMBLrel. 08, Last sequence update)
01-NOY-1998 (TIEMBLrel. 08, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              077872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MHC
                                                                                                                          077873
                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                            EMBL; AF049981;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Malaga-Trillo E., McAnd
Sueltmann H., Figueroa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=98315113;
                                                                                                                                                                                                            u
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ) CKP 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CKP
                                                                                                                                                                                     CKP
                                                                                                                                                                                                            CKP 7
                                                                                                                                                                                                                                   Similarity
3; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11
                                                                                                                                                                                                                                                                                              11
                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA;
                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                             AAC41320.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PubMed=9649539;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11
1133 MW;
                                                                                                                                                                                                                                                                                              1
11
1133
                                                                                                                                                                                                                               25.3%; Suc
100.0%; Pr
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25.3%;
100.0%;
                                                                                                                                                                                                                                                                                               X.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 21;
Pred. No.
                                                                                                                                                                                                                                              Score 21;
Pred. No.
                                                                                                                                                                                                                                                                                               283248EC3EB72728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      283248EC3EB72728 CRC64;
                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Vincek V.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                 polymorphism
                                                                                                                        11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11
                                                                                                                                                                                                                                              2.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28
                                                                                                                          ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    )B 7; L
.2e+03;
                                                                                                                                                                                                                                              .2e+03
                                                                                                                                                                                                                                                                                                                                                                                                           Zaleska-Rutczynska
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Zaleska-Rutczynska
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Perciformes; Labroidei;
                                                                                                                                                                                                                                                                                               CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                          Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 11
                                                                                                                                                                                                                                                                                                                                                                                 among
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       among cichlid
                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                   cichlid
                                                                                                                                                                                                                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mhc
                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
```

```
PRESULT
PAC PT
AC 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT
Q9UC37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOTT REPRESENTATION OF THE PROPERTY OF THE PRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q9UC37 PRELIMINARY;
Q9UC37;
01-MAY-2000 (TIEMBLIEL 13, C
01-MAY-2000 (TIEMBLIEL 13, I
01-MAY-2000 (TIEMBLIEL 13, I
ALPHA B CRYSTALLIN FRAGMENT 5
                                                                                                                                                                                                                                                                                                                                                                                                 01-FEB-1997
01-FEB-1997
01-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NON_TER
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Linkage
class II
Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDITINE-92218434; PubMed-1560006; Kato K., Shirohara H., Goto S., Inag "Copurification of small heat shock from human skeletal muscle."; J. Biol. Chem. 267:7718-7725(1992). SEQUENCE 12 AA; 1268 MW; D37BD52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
MEDLINE-98315113; PubMed-9649539;
Melaga-Trillo E., McAndrew B., Vincek V., Zaleska-Rutczynska Z.,
Sueltmann H., Figueroa F., Klein J.;
"Linkage relationships and haplotype polymorphism among cichlid Mhc
class II B loci.";
Genetics 149:1527-1547(1998).
    SEQUENCE FRCM N.A. STRAIN=168-94; MEDLINE=97311993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens (Human).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=8128;
                                                                                                                                                          Salmonella.
NCBI_TaxID=602;
                                                                                                                                                                                                                                           Salmonella typhimurium.
Bacteria; Proteobacteria;
                                                                                                                                                                                                                                                                                                                                                             SIGMA FACTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       P74844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Genetics 149:1527-1547(1998).
EMBL; AF049982; AAC41321.1; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>بــر</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4 ECKPOVT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        - CKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EEKPAVT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
3; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ø
                                                                                                                                                                                                                                                                                                                                                         (TremBLrel.
(TremBLrel.
) (TremBLrel.
) (TremBLrel.
)R (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25.3%;
nilarity 100.0%;
Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       267:7718-7725(1992).
AA; 1268 MW; D37BD529CCC1B2CD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1
11
1133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 25.
71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . 4 %
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WW;
                                                                                                                                                                                                                                                                                                                                                                                             02,
                                                                                                                                                                                                                                               gamma subdivision;
                                                                                                                                                                                                                                                                                                                                                                                             Created)
.Last sequence Last annumber of the control of the contro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Created)
Last sequence update)
Last annotation updat
5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 21; DB Pred. No. 2.4e. 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 21; DB
Pred. No. 2.2
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                283248EC3EB72728 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Craniata; Ve Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Inaguma
                                                                                                                                                                                                                                                                                                                                                                                             sequence update) annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         guma Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 7; Lo
2.2e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 4;
2.4e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Morishita R.,
with alpha B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      update)
                                                                                                                                                                                                                                               Enterobacteriaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             crystallin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Asano
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
```

PubMed=9168604;

```
RESULT P82438 ID P82438 AC P8 P8 DT 0: 0 DT 0:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SQ PRICE RAPPER 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFFRARA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN-CV. PETIT HAVANA;
Blee K.A., Bonham V.A., Mitchell G.P., Robertson D., Slabas A.R.,
Wojtaszek P., Bolwell G.P.;
"Proteomic study of secondary cell wall proteins from transformed
                                                                                                                                                                                                                                                                     Nicotiana tabacum (Common tobacco).

Bukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta;

Magnoliophyta; eudicotyledons; core eudicots; Asteridae; euasterids

Solanales; Solanaceae; Nicotiana.

NCBI_TaxID=4097;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-JUN-2000 (TrEMBLrel. 14, Created)
01-JUN-2000 (TrEMBLrel. 14, Last sequ
01-JUN-2000 (TrEMBLrel. 14, Last ann
50 KDA CELL WALL PROTEIN (FRAGMENT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        P82438
P82438;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Differential expression of FANCA and FANCC genes in human tissues alternative splicing of FANCA transcripts."; Submitted (NOV-1998) to the EMBL/GenBank/DDBJ databases.
EMBL; AJ131189; CAB46099.1; -.
                                                                                                                                                                                                       SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        D'Apolito M., Ianzano L., Savino M., Rommens J., Zelante L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens (Human).
Eukaryota; Metazoa; Chordata;
Mammalla; Eutheria; Primates;
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q9Y4Z9
    tobacco culture.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1-NOV-1999 (TrEMBLrel. 12,
1-NOV-1999 (TrEMBLrel. 12,
1-NOV-1999 (TrEMBLrel. 12,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 YTAE 4
||||
5 YTAE 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CKPQVTRG 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGPSHLRG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               h 25.3%;
Similarity 50.0%;
4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             h .25.3%; So Similarity 100.0%; F 4; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A.P., Stanley J., Sack R., Hunziker P., Brodard I.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1590 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 21; DB 4;
Pred. No. 3e+03;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 21;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8732D75A24DCA4F0 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 2;
5. 2.6e+03;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>;</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

```
밁
                                                                      å
                                                                                                                                                  SOFE
Search completed: March
Job time: 114 sec
                                                                                            Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                                                               Planta 0:0-0(2000).
-!- SUBCELLULAR LOCATION: CELL WALL.
-!- TISSUE SPECIFICITY: XYLEM.
Cell wall.
NON_TER
10
10
SEQUENCE 10 AA; 1126 MW; C58E324
                                                     N
                                                     PQYPXGNV 9
                                                                         POVTRGDV 14
                                                                                              Conservative
           6,
                                                                                                      24.1%;
50.0%;
            2001, 09:50:22
                                                                                              Score 20; DB
Pred. No. 3e+0
1; Mismatches
                                                                                                                                                  C68E32486AF77B46 CRC64;
                                                                                                       DB 10;
3e+03;
                                                                                               ω
                                                                                                                 Length 10
                                                                                               Indels
                                                                                              0;
                                                                                              Gaps
```

THIS PAGE BLANK (USPTO)

THIS PAGE BI ANK (USPTO)